Commute Profile 2000

A Survey of San Francisco Bay Area Commute Patterns

This report was prepared as part of the Metropolitan Transportation Commission's Regional Rideshare Program. The contents of this report reflect the view of the author who is responsible for the facts and accuracy of the data presented herein. The contents do not necessarily reflect the views or policies of the Metropolitan Transportation Commission.

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A Message from the Executive Director

RIDES for Bay Area Commuters' eighth edition of Commute Profile offers some encouraging news and reaffirms a few things we already knew.

Travel distance and time continue to increase and commuters report conditions are worse than last year. The bright spot is HOV lanes where time savings increased dramatically to an average of 21 minutes on a one-way commute!

Commute Profile helps us understand commuter motivation. It is up to all of us to utilize this data in a beneficial way. We welcome your ideas and suggestions on how we can make future issues even more useful.

Sincerely,

Catherine L. Wasikowski

Catherine L. Wasikowski
Executive Director
RIDES for Bay Area Commuters, Inc.

Commute Profile 2000 Contents

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Executive Summary

The Commute Profile survey series is designed to track the commuting behavior of Bay Area residents, to better understand the make-up and motivations of commuters, and to characterize specific segments of the market. The results are examined on a regional level and for each of the nine Bay Area counties separately. The survey focuses on trip characteristics such as mode, distance, travel time and changing conditions; it examines behavioral motivation, the influence of infrastructure, such as HOV lanes and parking, as well as awareness of services and demographic characteristics.

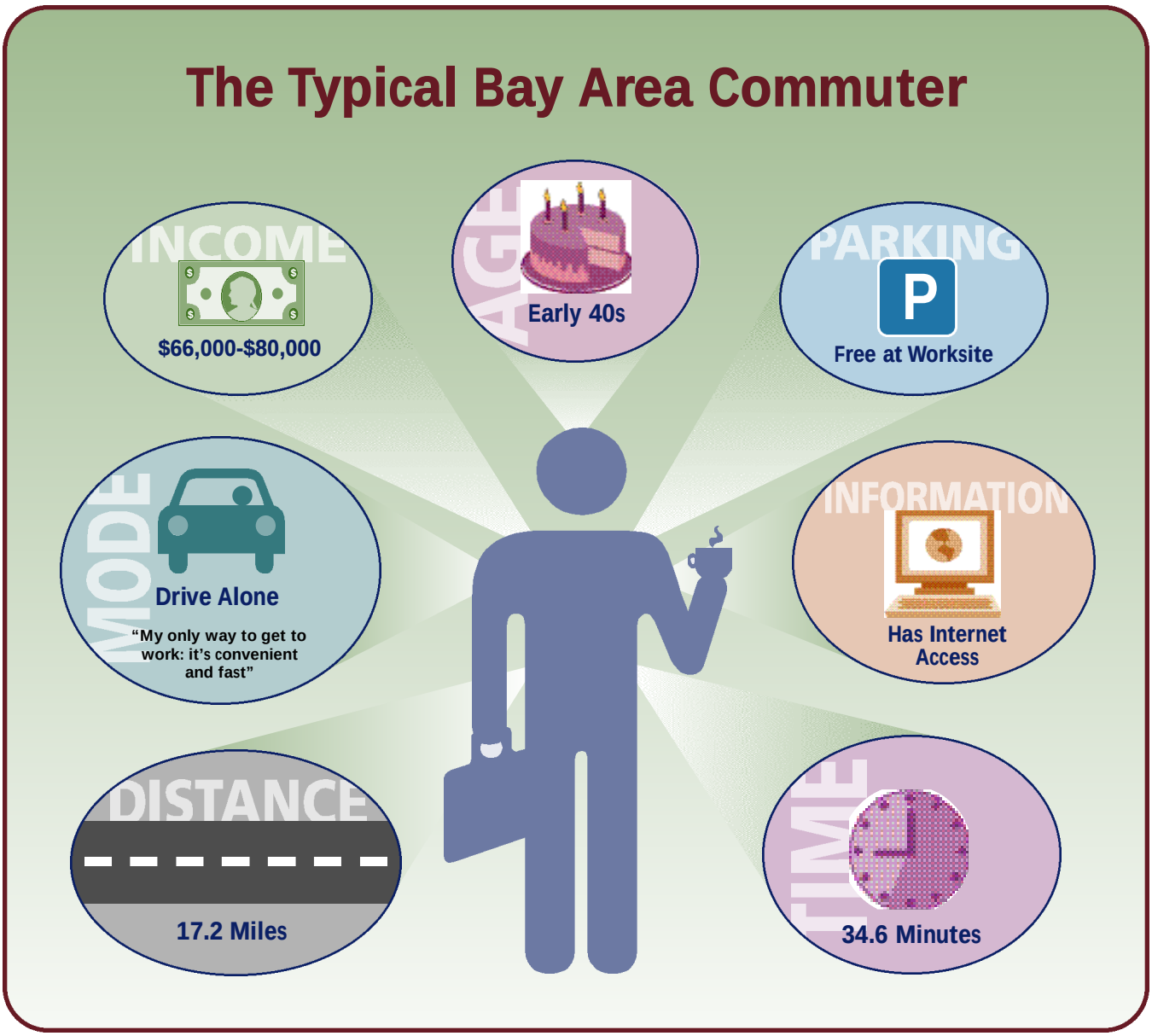
Information from Commute Profile can be assembled to build a profile of the typical Bay Area commuter (Figure 1). A typical commuter drives 17 miles by himself each morning to work and parks his car free of charge. He drives primarily because he feels it is his only option, it's convenient, and it's his fastest alternative—even though in takes him almost 35 minutes. He's fairly well off financially with a household income in the $66,000-$80,000 range, and he most likely has regular Internet access.

Travel mode is one of the key pieces of information tracked in the Commute Profile series. Despite some small annual variations, data from this year's survey support a relatively stable mode split over

the long-term. The drive alone rate is essentially the same now as in 1993 when commute mode data were first collected. The number of commuters telecommuting, although it represents only a small percentage of total trips, has increased significantly in the last three years.

Commute distance appears to be increasing moderately over the long-term (7% since 1992) for commuters in the nine-county Bay Area. The

Figure 1



average travel time, on the other hand, increased by almost 15% in the last year from 30 minutes to 34 minutes each way. The small increase in trip distance and the larger increase in travel time results in slower travel speeds—commuters now average less than 30 miles per hour. Slower speeds are most likely the result of increased congestion.

The percentage of commuters indicating that their commute conditions were worse increased significantly in the last year. Given the growing employment and population and limited resources for expanding the region's transportation capacity, this does not come as much of a surprise. On the positive side, there appears to be an increased willingness of respondents to try options to driving alone.

Carpool lanes, based on Commute Profile findings, play an important role in motivating commuters to use high occupancy vehicle (HOV) modes. Sixty percent of respondents who were currently using a carpool, vanpool or bus indicated that the carpool lane had influenced their choice of travel mode. Of those who regularly use the carpool lane, only 20% indicated that they would continue to use an HOV mode if the carpool lane did not exist.

Modifying the region's infrastructure to discourage driving alone is a difficult and long-term challenge, but based on the evidence here one that has merit. Although seven out of ten commuters drive their car by themselves, the rate drops to four out of ten in areas where one must pay to park and frequent transit service is available.

Commute Profile provides a sense for which modes hold the most promise and which segments of the population are most likely to be interested in the use of those options. Carpooling, transit and bicycling (in that order) are the options that respondents find most appealing. Those most interested in carpooling tend to be younger and to have higher than average incomes. Commuters with a higher level of interest in transit are more likely to be male and somewhat younger. Respondents with a higher level of interest in bicycling are much more likely to be male and much more likely to be younger than the average commuter.

Awareness of the regional matching service, awareness of RIDES, and awareness of the 800 phone numbers all continue to decline. Raising the level of awareness is a big challenge given the competition for consumers' attention from products and services with more resources than the regional ridesharing program. The Commute Profile survey points us to a relatively new tool that can be used to raise awareness—the Internet. Access to the Internet and its use for transit and traffic information is up significantly; eight of ten commuters now have regular Internet access and 14% of respondents use the Internet for traffic and transit information. This is an information dissemination tool RIDES and others should explore in greater depth.

Starting with the 1998 version of Commute Profile, home and work zip code data were collected from all respondents. In addition to expanding the scope of the survey in the near future, our long-term plan is to combine several years' results, creating a larger data set. This larger data set can be divided at finer geographic levels based on aggregations of zip codes. The data could then be used to study specific issues at the local or corridor level.

Section One:

Regional Report

Introduction

This section describes Commute Profile's *history and methodology.*

In March and April 2000, RIDES for Bay Area Commuters, which operates the Bay Area's Regional Ridesharing Program under contract to the Metropolitan Transportation Commission (MTC), conducted its eighth Commute Profile survey. Commute Profile is an annual region-wide telephone survey of commuters. The study is designed as a market research tool to help RIDES and others better understand Bay Area commute patterns. Commute Profile is unique among Bay Area surveys in that it focuses on commuters, their travel behavior and trends.

To track commute trends over time, Commute Profile has retained a group of core questions. The core questions include:

- Commute Modes
- Factors in Commute Mode Choice
- Travel Conditions
- Commute Distance and Time
- Use of HOV lanes
- Availability of Free Parking
- Telecommuting
- Employer Involvement
- Potential Use of Options to Driving Alone
- Awareness of RIDES and Local TDM[1] Services
- Demographic Information

Additional questions on matters

Table 1

Commute Profile Historical Summary

Year	Completed Questionnaires	Counties with Full Sample	Direct Costs Budget[2]
1992	1,600	1	$22,245
1993	2,800	6	$40,325
1994	3,200	7	$44,600
1995	1,090	2	$11,844
1996	3,450	8	$41,152
1998	1,608	2	$19,000
1999	3,628	9	$42,000
2000	3,600	9	$42,670

such as public policy, employer assistance, Internet access, etc. are rotated each year depending on current interest of RIDES, MTC, and others who participate in the planning of Commute Profile. These rotating blocks of questions add an important element of flexibility to the study. This year's survey included questions about the usefulness of Park & Ride lots, awareness of Guaranteed Ride Home programs, Commuter Check® and the 817-1717 TravInfo® regional telephone information service.

Methodology

The target population for Commute Profile is adults over the age of 18 who are employed full-time (35 hours or more) outside the home. This group is the primary customer for RIDES' services and approximates the journey-to-work subgroup from the Census. The Census, however, includes part-time workers, students and people who work at home—making the data sets not fully compatible.

The sample size for Commute Profile has varied from year to year as a result of budget considerations (Table 1). Larger sample sizes allow for more accurate regional data and for data that are meaningful at the county level. The year 2000 survey included a regional sample of 3,600 or 400 for each of the nine counties.

Between March 15 and April 30, 2000, a market research consultant administered telephone surveys to 3,600 Bay Area residents. Phone numbers were randomly generated, and calls were made in the evenings or on weekends. The interviews were divided between counties as shown in Table 2. For the county-level analysis the original data are used, this provides the maximum sample size of each county. For the region-wide analysis, a weighted data

[1] *Transportation Demand Management (TDM) measures improve mobility and air quality, reduce congestion and conserve energy by promoting alternatives to driving alone.*
[2] *This is the budget for acquiring the sample, conducting the telephone interviews and delivering a clean data set.It does not include questionnaire design, analysis and report preparation—RIDES staff time for these tasks is approximately three months (0.25 F TE).*
[3] *Population estimates are based on ABAG Projections 2000.*

set is used. The weighting is based on employed residents per county (Table 2).

Commute Profile data are based on samples and, as with any sample, some of the year-to-year fluctuations are due to normal sampling error. County populations, based on employed residents, vary from 62,000 (Napa) to 929,000 (Santa Clara)[3]. The samples of 400 from each county have a normal sampling error of five percent and a confidence level of 95 percent associated with them. The region-wide population of employed residents is estimated to be 3,500,000. The regional sample of 3,600 has a normal sampling error rate of two percent and a confidence level of 98 percent associated with it. A two percent sampling error means that if the survey was conducted 100 times, one would be confident that 98 times out of 100, the characteristics of the sample would reflect the characteristics of the population within plus or minus two percent.

Table 2

Distribution of Interviews by County

County	Number of Completed Interviews	Weighted Sample for Regional Analysis
Alameda	400	1.84
Contra Costa	400	1.16
Marin	400	0.36
Napa	400	0.15
San Francisco	400	1.12
San Mateo	400	1.00
Santa Clara	400	2.35
Solano	400	0.47
Sonoma	400	0.54
Total	**3,600**	

How Bay Area Residents Commute

This section discusses primary commute mode, secondary commute modes, duration of mode use, carpool dynamics, commute distance and time, carpool lane use and telecommuting.

Primary Commute Mode

Driving alone continues to be the dominant form of commute transportation in the Bay Area with 67% of commuters making the daily trek to work by themselves in their vehicle (Figure 2). The next most commonly used mode is carpooling—just under 14% of respondents carpool to work each day. BART and buses are the next most used commute modes at 6.6% and 5.0% respectively. Bus ridership had climbed to an all time high in 1999 of 7.2%. It is now back to a level very similar to earlier surveys indicating that the 1999 number was most likely an anomaly. The Bay Area's newest transit service, the Altamont Commuter Express (ACE), showed up on the radar screen for the first time last year with 0.2% of respondents indicating that they use that mode, and this year its presence is even more significant.

Last year the percentage of respondents indicating that telecommuting was their primary mode had increased significantly from 0.2% in 1998

to 1.1% in 1999. To make sure the number was not inflated as a result of respondents with home-based businesses, an additional question was added. It asked specifically if respondents had a home-based business without any other regular work location outside their home. Even with the additional screening question, the percentage of telecommuters remained at 1.1% for 2000.

The percentage of respondents reporting bicycling as their primary mode increased from the last couple of years. In 1998, bicycling was at 0.8%. It nudged up to 1.0% in 1999, and in 2000 it is up to 1.7%.

Figure 2

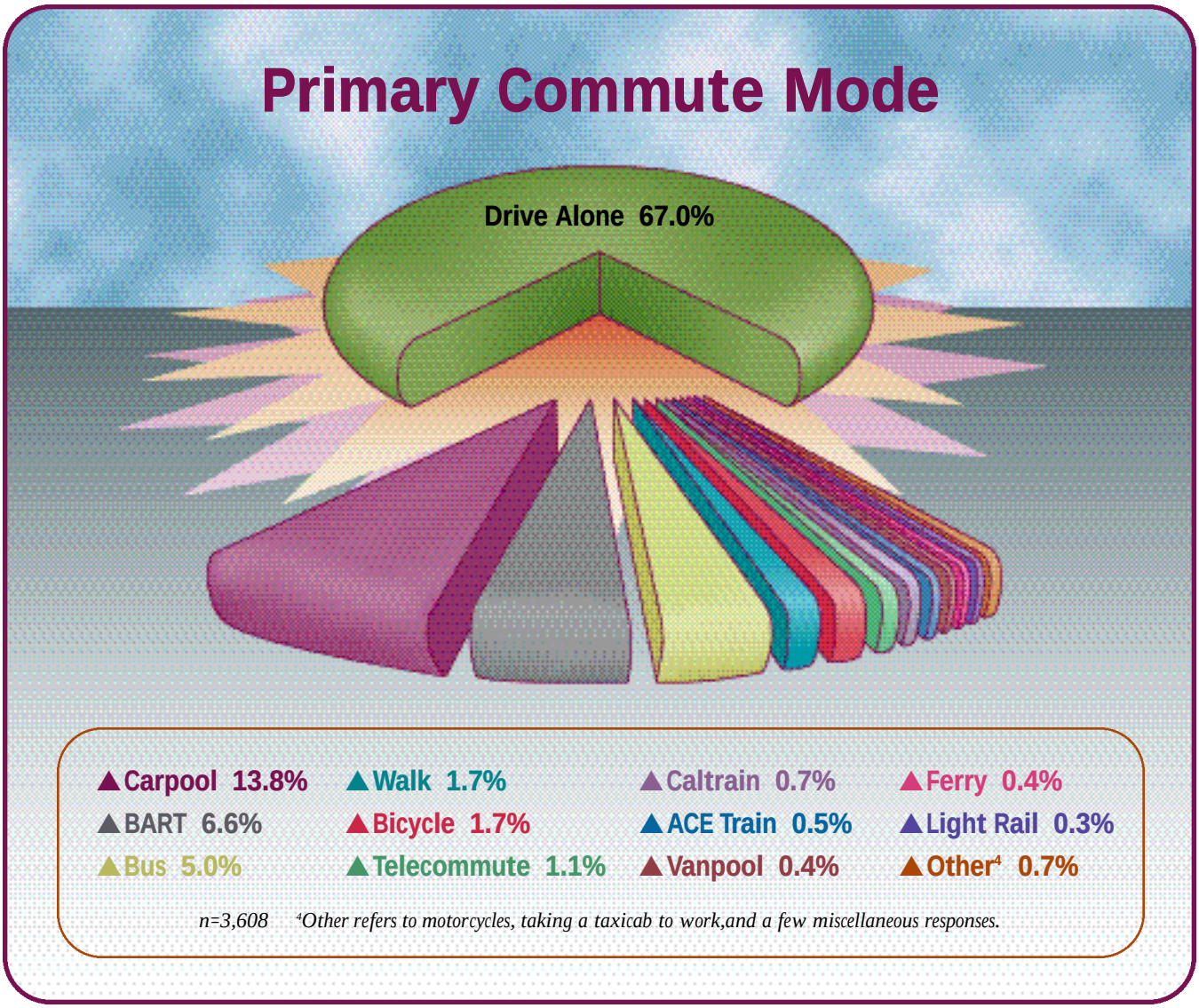
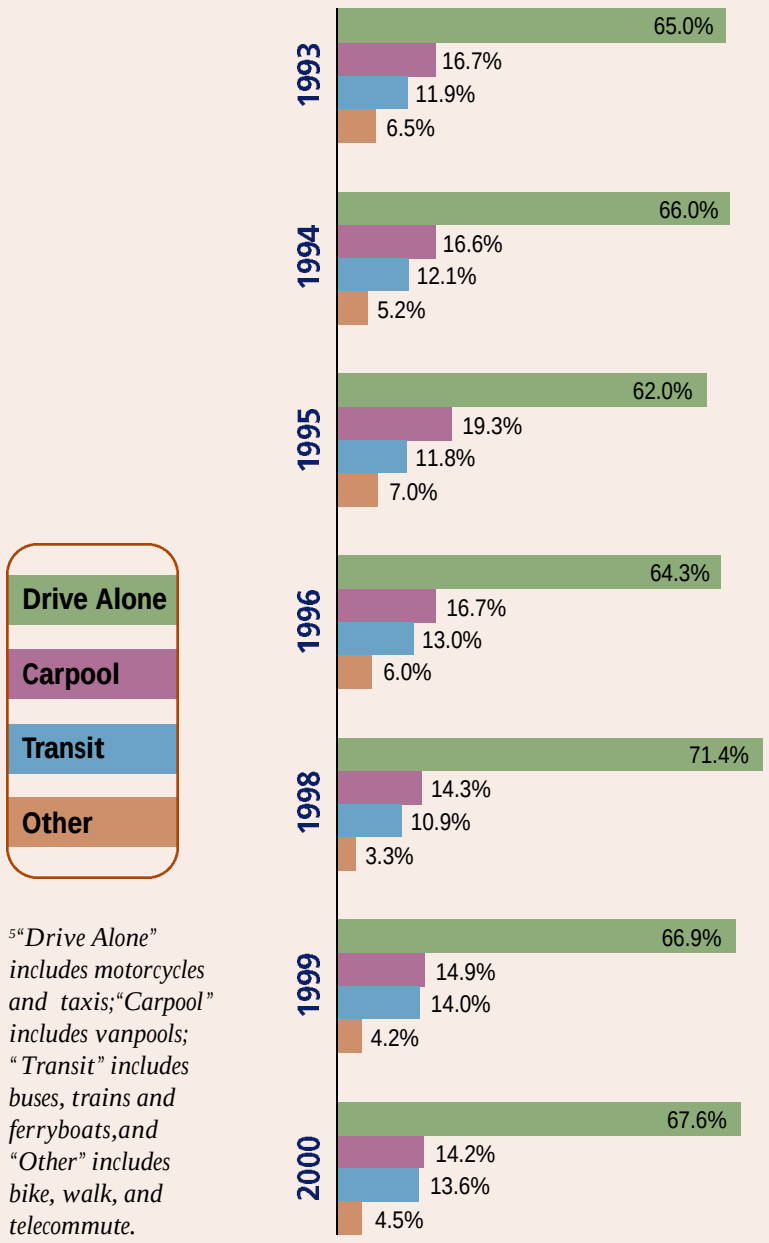


Figure 3

Clustered[5] Modes over Time



[5]"Drive Alone" includes motorcycles and taxis;"Carpool" includes vanpools; "Transit" includes buses, trains and ferryboats,and "Other" includes bike, walk, and telecommute.

The changes in mode between 1999 and 2000 are the smallest annual fluctuations recorded to date. In the four clustered categories shown in Figure 3 the fluctuations are all less than one percent. Driving alone nudged up slightly while carpooling and transit use declined modestly. None of these changes are considered significant.

In 1998, there was a change made in the methodology used to classify carpoolers.[6] The impact of this change is a shift of about two percentage points from carpooling to driving alone. If one were to add the two percentage points to the drive-alone rate for years prior to 1998, it would make the current drive-alone rate approximately equal to the previous years. It also appears that 1998 (where the drive alone rate spiked above 71%) was an anomaly.

COUNTY COMPARISONS

Commuters who live in Napa, Santa Clara and Sonoma are the most likely to drive alone (Figure 4). San Francisco com-

[6]In 1998,the methodology used to classify carpoolers was changed. Only those drivers who had passengers three or more days a week were classified as carpools.In earlier editions,the definition was more ambiguous which resulted in some additional respondents being classified as carpoolers. Consequently, carpool estimates for years prior to 1998 are somewhat inflated.

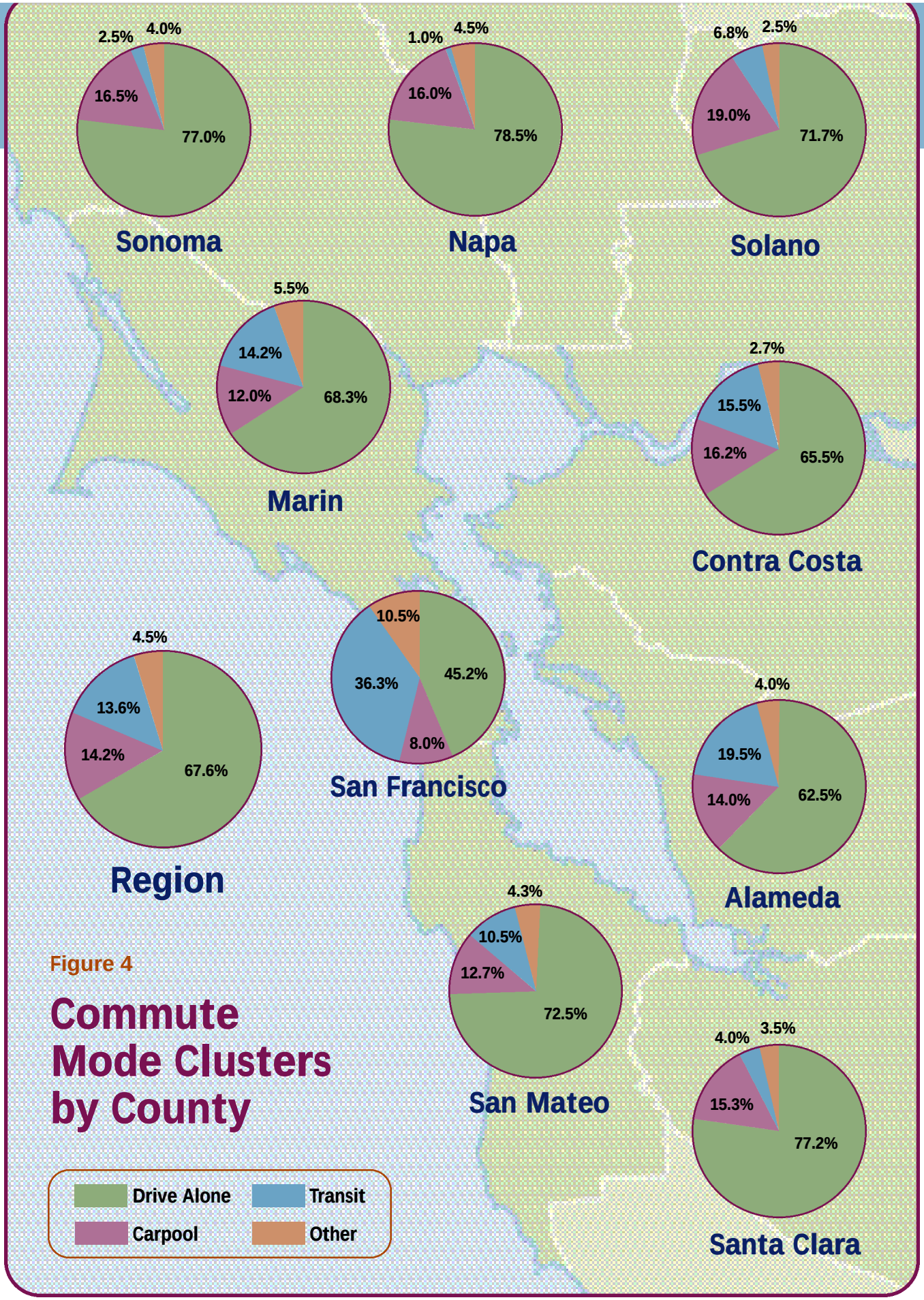


Figure 4

Commute Mode Clusters by County

All counties n=400;Region n=3,608

Table 3

Secondary Commute Modes

Mode		Mode	
Drive Alone	34.2%	ACE	1.8%
Carpool	19.8%	Motorcycle	1.4%
Telecommute	14.4%	Ferry	1.4%
BART	7.9%	Caltrain	1.1%
Bus	6.8%	Light Rail	1.1%
Walk or Jog	4.0%	Other	2.5%
Bicycle	3.6%	*n=278*	

muters are least likely to drive alone to work; they have the lowest carpool use, the highest transit use and the highest use of "other" modes such as walking and biking. Carpooling is most popular for Solano County residents (the carpooling category includes a significant number of vanpoolers). Napa and Sonoma counties—the Bay Area's most rural counties—have the smallest percentage of residents using transit.

Table 4

Secondary Mode by Primary Mode

		Primary Mode			
		Drive Alone	Carpool/ Vanpool	Transit	Other
Secondary Mode	Drive Alone		71.4%	48.8%	51.4%
	Car/Vanpool	41.7%	4.1%	13.4%	16.2%
	Transit	11.9%	18.4%	18.3%	24.3%
	Telecommute	29.8%	6.1%	9.8%	5.4%
	Other	14.3%	0%	9.8%	2.7%
	n=	*84*	*49*	*82*	*37*

Secondary Mode

Most respondents (92.3%) use the same mode each day they commute. A relatively small number (7.7%) of respondents use a secondary mode on a regular basis (i.e., one or more days a week). Table 3 shows that driving alone is the most popular secondary mode, followed by carpooling and telecommuting. The results are similar to previous years.

The most popular secondary mode for commuters who normally drive alone is carpooling (Table 4). Telecommuting is also a popular option for folks who normally drive alone. The percentage of drive alone commuters who telecommute as a secondary mode is up significantly from last year when only 18.5% of drive alone commuters telecommuted as a secondary mode (compared with 29.8% this year).

The opposite is true for carpoolers—driving alone is their most common secondary mode. The percentage of carpoolers who drive alone as a secondary mode is up significantly from last year when 54.8% of carpoolers drove

alone as a secondary mode (compared with 71.4% this year). Transit riders use a variety of secondary options including alternative transit services. For commuters who normally use "other" modes driving alone and transit are the most common secondary modes.

Duration of Mode Use

With three years of relatively consistent data available on the use the various modes, some patterns have emerged. Commuters who drive alone exhibit the greatest loyalty to their mode of travel; they have been driving alone to work for an average of 11.9 years (Table 5). Transit users had the second longest average duration at 5.8 years. However, the data from the 2000 survey shows "other" mode users exceeding the reported duration of transit users for the first time. Carpoolers reported an average duration of just under four years in 2000—up significantly from 1998 when the reported duration was only two and a half years.

Carpool Dynamics

Data on carpool duration has been collected as part of the Commute Profile survey since 1993. Estimates have varied considerably from year-to-year from a low of 1.5 years in 1996 to a high of 3.9 in 2000 (Figure 5). Although there is considerable variation from year to year, the average of all years combined is approximately 3.0 years. Keeping a carpool together is apparently more challenging than continuing with other modes.

Most Bay Area carpools (70.0%) have two occupants; the average carpool size is 2.74 occupants. Over the years, carpool occupancy has been relatively stable varying from a high of 2.75 to a low of 2.46.

Table 5

Years in Current Mode

	Drive Alone	Transit	Other	Carpool
2000	11.7	5.4	5.6	3.9
1999	10.8	6.4	4.9	3.8
1998	13.3	5.7	4.7	2.5
3 yr. average	**11.9**	**5.8**	**5.1**	**3.4**

Figure 5

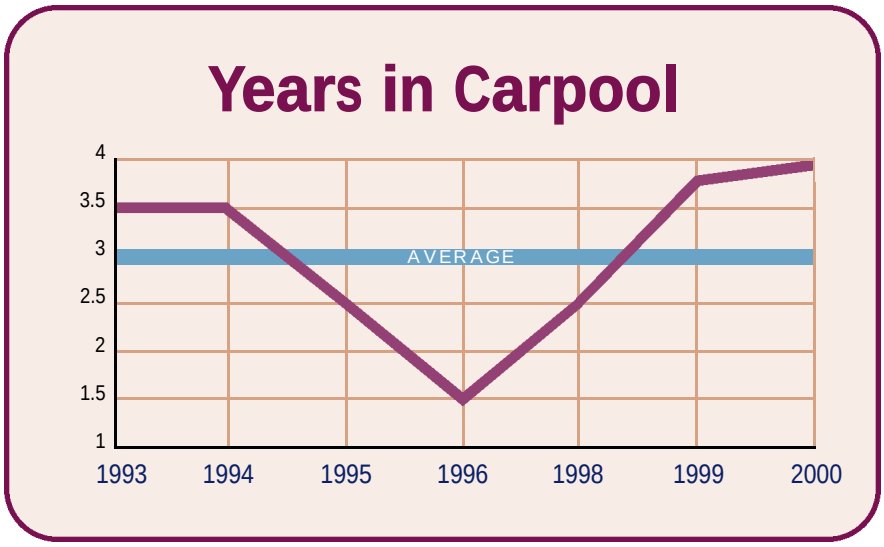
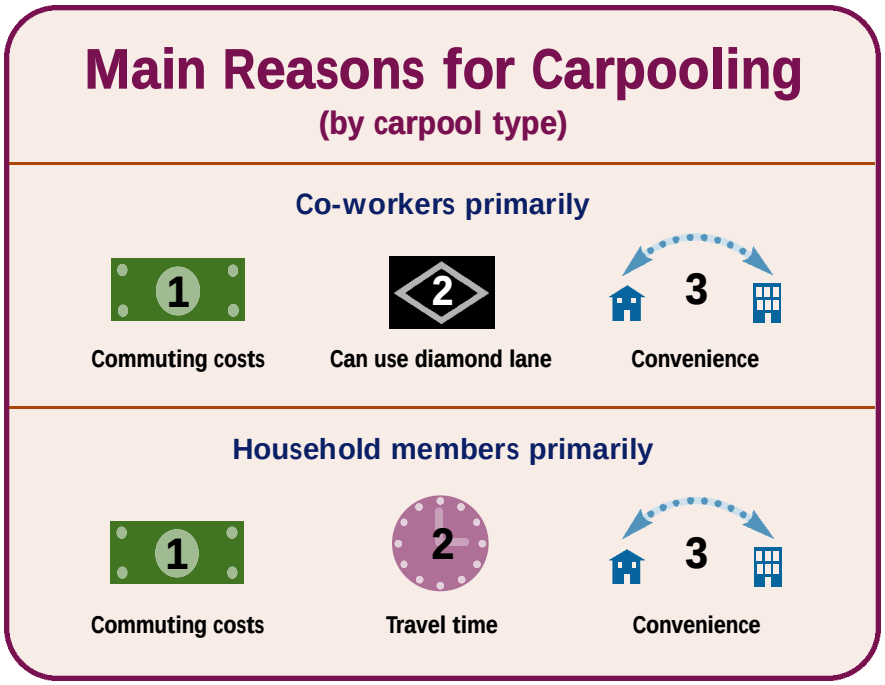


Figure 6



Most respondents (42.0%) indicated that they carpooled with co-workers. Household members were a close second—36.4% of carpools include members of the same household. Co-workers and household members are consistently the two most common groups of carpoolers, and they have traded the number one and two spots from year-to-year. The next most common arrangement (12.0%) was with friends or neighbors. Four percent of carpoolers indicated that they participated in casual carpools[7], and 3.7% of carpools included relatives who did not live in the same household.

It is interesting to note the differences and similarities in reasons given for carpooling between carpools that include primarily co-workers and those of primarily household members (Figure 6). Keeping commute costs down is the top reason for both groups. Use of the diamond lane for co-worker-

Figure 7

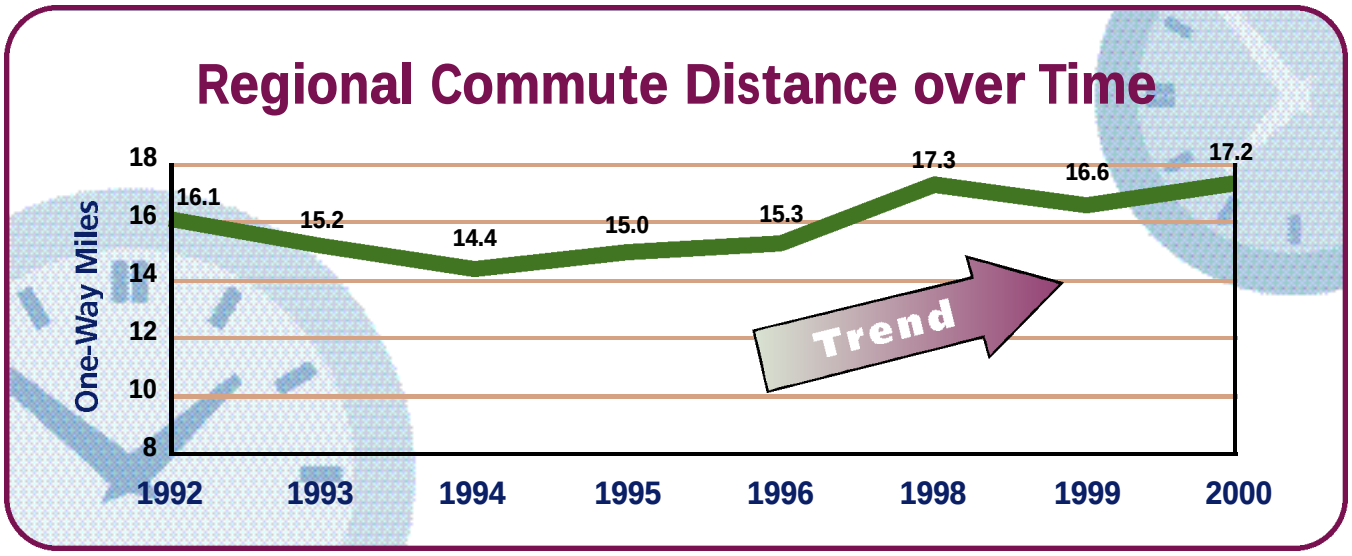


Table 6

Commute Distance over Time (by mileage)

One-Way Miles	1992	1994	1995	1996	1998	1999	2000
0-5 Miles	29.0%	36.3%	33.8%	32.7%	25.1%	27.6%	27.8%
6-10 Miles	18.3%	18.1%	18.6%	20.0%	20.2%	19.8%	17.2%
11-20 Miles	26.0%	23.4%	24.9%	24.6%	27.5%	26.1%	25.9%
21-40 Miles	20.4%	16.8%	15.2%	16.1%	20.7%	19.0%	22.0%
41+ Miles	6.3%	5.4%	7.6%	6.6%	6.5%	7.5%	7.1%
n=	*1,600*	*3,201*	*400*	*3,188*	*1,171*	*3,572*	*3,608*

based carpools and travel time for household-based carpools were the number two reasons. In the 1999 survey, transporting kids was in the top three for household-based carpools; this year it dropped to sixth.

Commute Distance

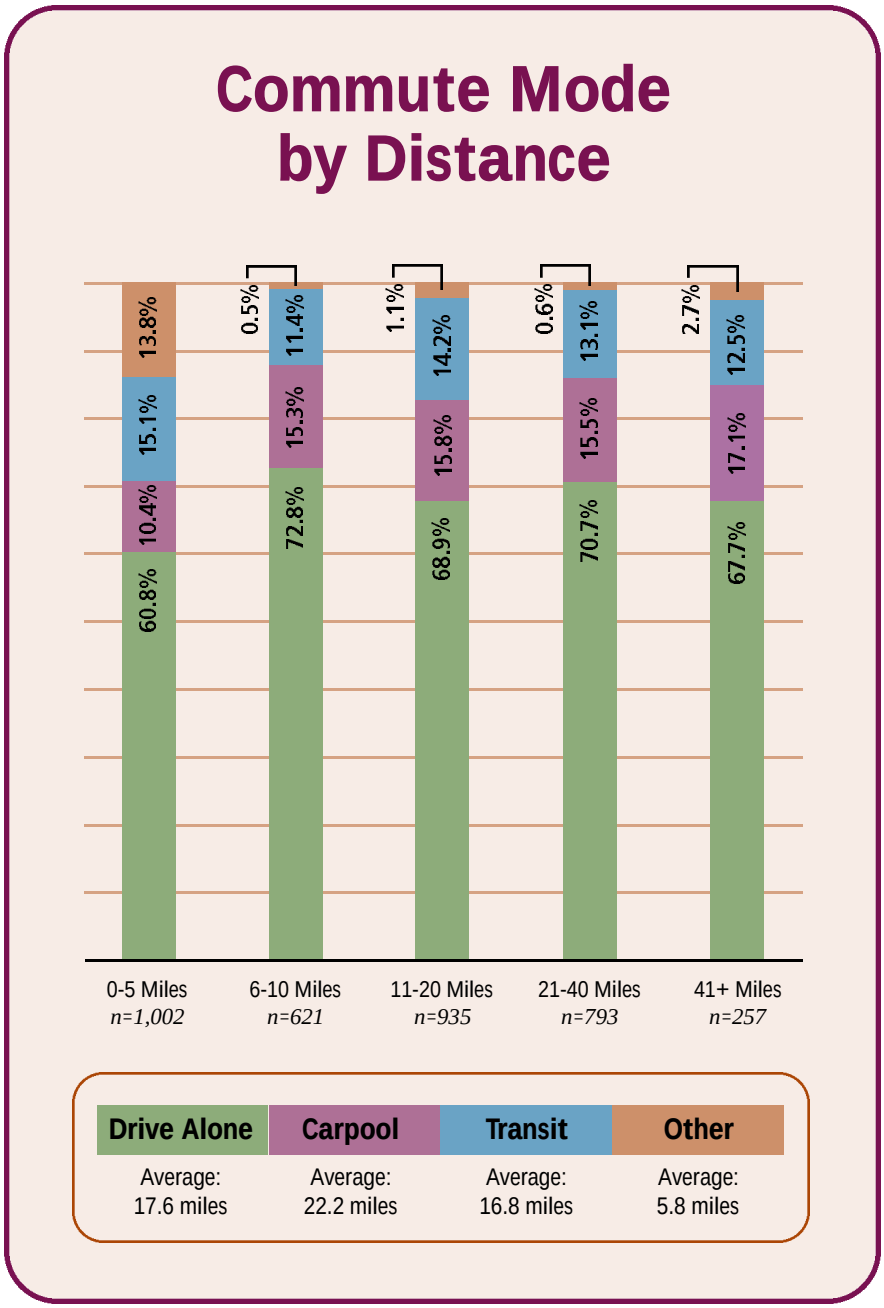
Although a small decrease in average commute distance was noted in 1999, the average one-way trip distance in 2000 is back to approximately the same level as 1998 (Figure 7). As noted in the 1999 survey, an increased number of telecommuters (i.e., trip distance=0) was partially responsible for the decrease that year. In 2000, the telecommuting rate has remained relatively high and the trip distance has increased. The long-term trend, despite the small dip in 1999, is one of slightly increasing commute distances. It is worth noting here that the Commute Profile sample does not include counties adjacent to the core nine Bay Area counties, such as Stanislaus and San Joaquin, which actually account for some of the longest commutes in the region.

Over a quarter of Bay Area commuters travel less than five miles to work (Table 6). Long distance commuters (41 miles or more) are still the smallest segment of the commute market. Overall there have not been significant changes in the percentage of commuters in the mileage grouping shown in Table 6. However, the percentage of commuters traveling 0-5 miles has been on a downward trend since 1994.

Short distance commuters are the most distinct group. The drive-alone rate is lowest among commuters traveling five miles or less to work (Figure 8). Short distance commuters have the highest "other" rate, which includes options such as biking and

[7] *Casual carpooling is a flexible approach to commuting where drivers offer rides to passengers previously not known to them to qualify for use of the high occupancy vehicle (HOV) lanes. Casual carpools form at numerous East Bay sites in Alameda, Contra Costa and Solano counties. These pick-up locations are all located near transit routes that provide parallel service. For the most part, casual carpooling is a one-way phenomenon providing passengers a free ride to San Francisco in the morning; BART and AC Transit provide the ride home in the evening for most passengers. For more information see* Casual Carpooling 1998 Update, *January 1999, RIDES for Bay Area Commuters, Inc.*

Figure 8



walking. These short distance commuters also have the highest level of transit usage and the lowest carpool use. The differences between the other groups are subtle. Carpooling is highest among commuters who travel 41 miles or more, and those traveling between 6 and 10 miles are the most likely to drive alone. The second highest percentage of "other" mode users is found in the 41 miles or more category. This is explained by a number of telecommuters and a few hearty bicyclists who responded to our survey.

COUNTY COMPARISONS

Residents of Solano County, on the average, continue to travel the longest distances to work. As noted in previous years, they travel more than twice the distance to work as residents of San Francisco and almost twice the distance of Santa Clara County commuters.

Commute distance for each county was collected in 1996, 1999 and 2000 (Table 7). The counties with the longest and shortest commutes have not changed over the past three years and most of the changes within counties have been subtle. Contra Costa County showed the largest increase (from 20.7 to 22 miles). Alameda and Sonoma actually showed small decreases. A decrease was noted for residents of San Mateo County last year, and although their distance is back up a bit this year it is still slightly below the 1996 distance. The year-to-year changes are generally not significant, but Table 8 does show that the changes are similar between counties.

Table 7

Average Commute Distance by County of Residence
(in one-way miles)

County	1996	1999	2000
Solano	23.1	26.6	26.6
Contra Costa	19.3	20.7	22.0
Sonoma	19.0	21.2	20.3
Napa	19.0	19.3	20.1
Marin	15.7	17.4	17.8
Alameda	15.7	17.4	17.1
San Mateo	15.7	15.1	15.5
Santa Clara	13.8	14.0	14.2
San Francisco	9.1	11.4	11.8

Commute Time

The average number of minutes it takes to travel to work increased by over four minutes and has reached an all-time high. Travel distance has increased moderately which means that travel speeds have slowed. The average travel speed, which is just under 30 miles per hour, is also the slowest recorded to date. Increased travel time may well be the result of continued strong job growth and associated congestion.

COUNTY COMPARISONS

The longest commute travel times were reported by

Figure 9

Commute Distance and Time

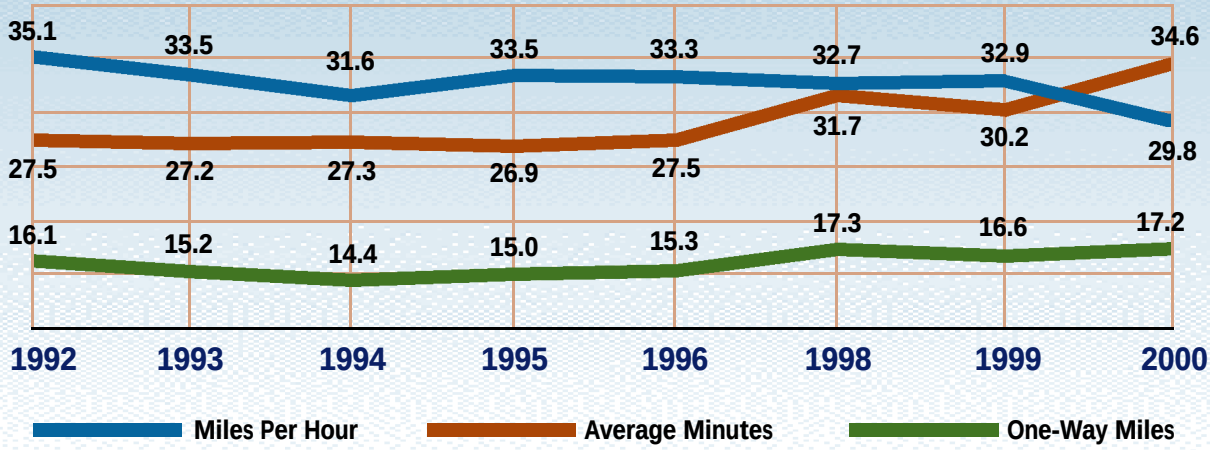


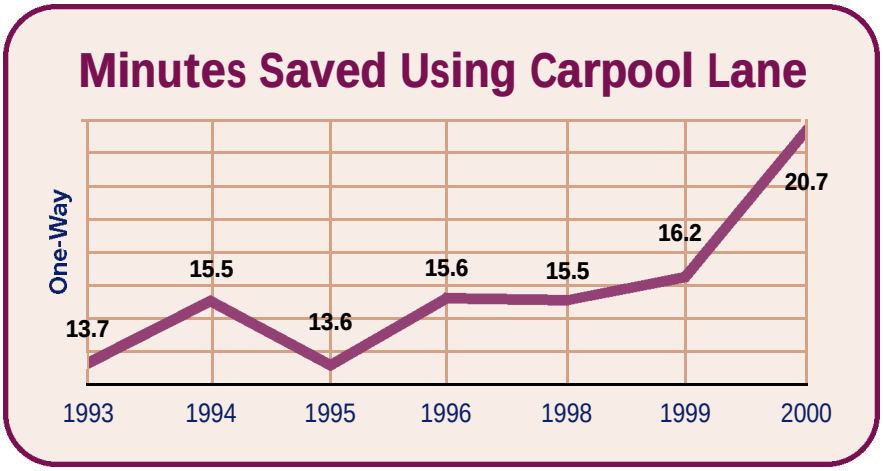
Table 8

Travel Speed by County

County	Distance	Time	MPH
Sonoma	20.3	35.3	36.9
Napa	20.1	33.0	36.5
Solano	26.6	43.2	34.5
Contra Costa	22.0	40.1	32.9
San Mateo	15.5	30.4	30.6
Alameda	17.0	34.9	29.2
Santa Clara	14.2	29.3	29.1
Marin	17.8	40.0	26.7
San Francisco	11.8	33.6	21.1

residents of Solano, Contra Costa and Marin counties. The shortest commute travel times were reported by residents of Santa Clara and San Mateo counties. The fastest travel speeds are found in the Bay Area's less urban counties of Sonoma, Napa and Solano. On the other end of the spectrum, San Francisco, the region's most urbanized county, posted the slowest travel speed.

Figure 10



Carpool Lane Use

Forty-one percent of respondents indicated there was a carpool lane along their route to work. Commuters from Marin and Santa Clara (both 56%) are most likely to have carpool lanes along their commute, and commuters from Napa (16%) and San Francisco (21%) are least likely to have carpool lanes along their route.

Of those who indicated there was a carpool lane along their route to work, 13.0% said they used the lane regularly.[8] This is down from last year, when 22.3% of respondents indicated that they used the lanes. This may be partially due to a change in methodology. Only respondents who indicated that their primary means of travel was an HOV mode were asked the series of questions on carpool lane use. In previous years, anyone who indicated that there was an HOV lane along their route was asked if they use it regularly for their trip to work—regardless of their primary mode. As a result of this change, we may have missed some individuals who carpool with family members

[8] *This is approximately 6% of all respondents.*

and were not initially classified as carpoolers.

Of those who currently use the lanes, 88% indicated they save time by doing so. This is similar to last year, when 85% said the carpool lane saves them time. The estimated time saved getting to work by carpool lane users is just over 20 minutes—an increase over previous years (Figure 10). The greater time saved is consistent with other findings that showed travel time in general increasing (i.e., as traffic on the mixed flow lanes slows and HOV lanes maintain a higher speed the time saved is increased).

Two questions were added to the Commute Profile survey in 1999 to examine in more detail how carpool lanes influence mode choice. Respondents who regularly use the carpool lane, were asked if it influenced their decision to carpool, vanpool or use transit. Sixty percent (60%) indicated that the carpool lane had indeed influenced their decision. A follow-up question was then asked: Would you continue to carpool, vanpool or ride transit if the carpool lane did not exist? Approximately two-thirds (66%) of respondents indicated that they would not continue the use of an HOV mode if the carpool lane did not exist (Figure 11). Although not as extreme as last year when only 9% indicated they would continue to carpool without the carpool lanes, it is still clear that the carpool lanes play an important role in motivating commuters to use HOV modes. The "no" response is similar for the last two years; the change from last year is primarily from "not sure" category to the "yes" category.

Telecommuting

Most respondents (78%) indicated they do not have the

Figure 11

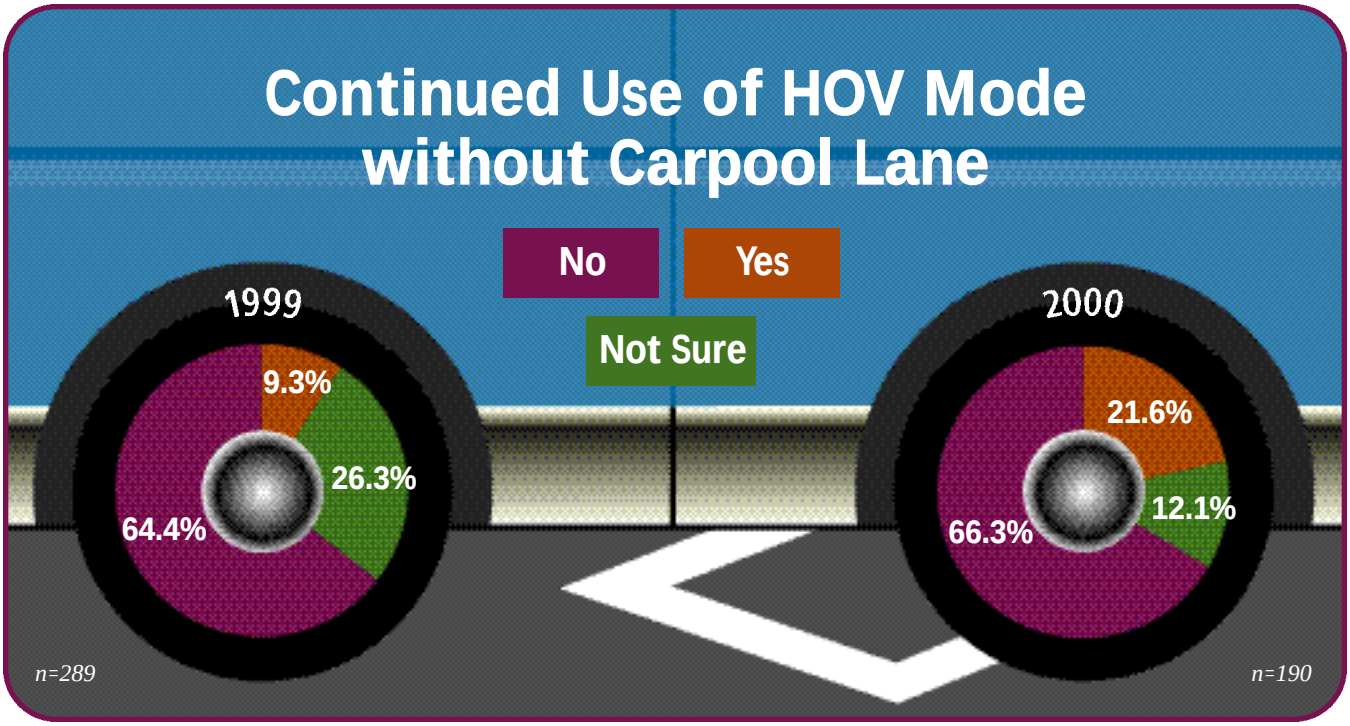
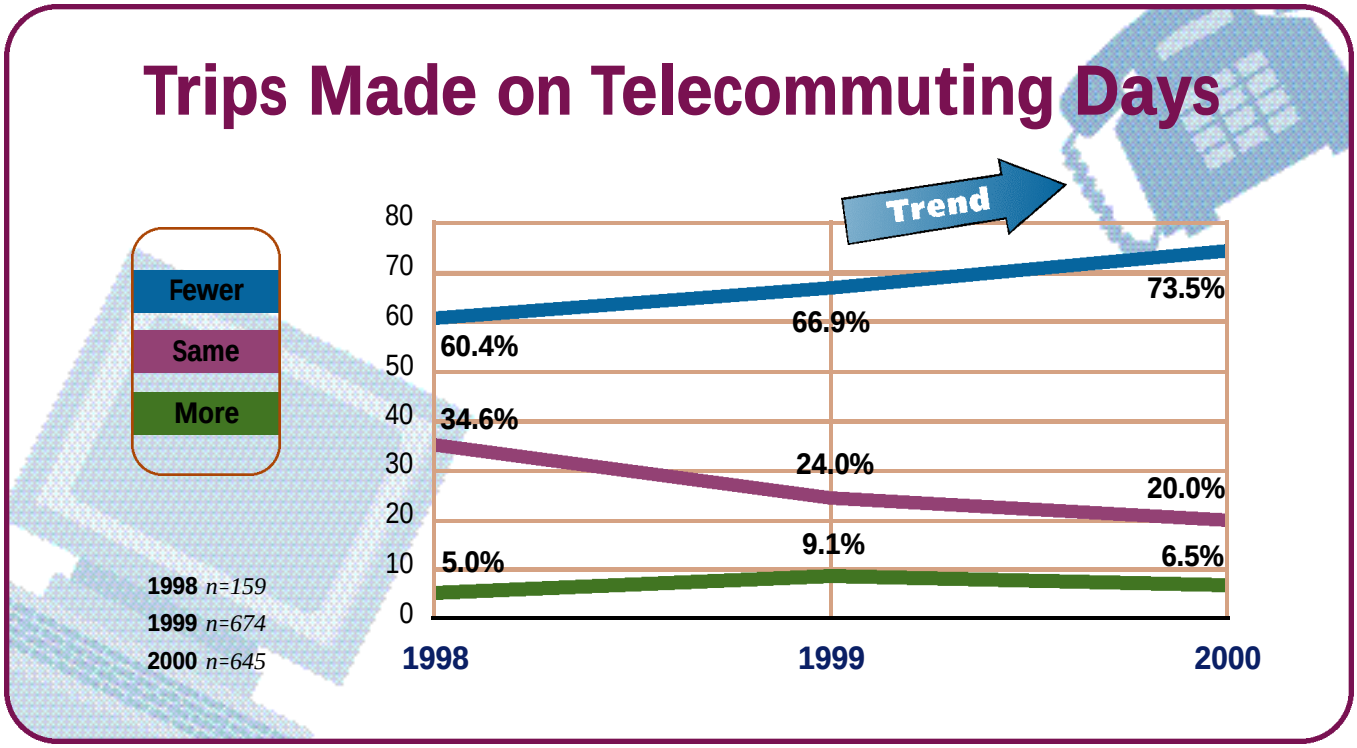


Figure 12



option to work at home instead of going to their regular place of work. Only 21% of respondents indicated their employer provides them the opportunity to telecommute (1% didn't know). These numbers are almost identical to last year, but up a bit from previous years when 16% of respondents indicated that telecommuting was an option available to them. These numbers are consistent with increases in the number of respondents who indicated that telecommuting was their primary commute mode the last two years.

Approximately 85% of respondents who have the option to telecommute take advantage of it. Of those who do telecommute:

- 21.0% do so one day per month,
- 40.0% do so two to four days per month,
- 38.5% do so five or more days per month.

The average is 5.3 days per month. This is down a bit from the last two years. In 1999, the average was 6.6 days per month; in 1998 the average was 5.9 days per month. However it is up from 1996 when the average was 4.6 days per month.

Since one goal of telecommuting is to reduce vehicle trips, respondents were asked if they made more, the same or fewer trips on days when they telecommute compared with days when they commuted to work. Although 13.3% of respondents indicated that they did not know if they made more or fewer trips, Figure 12 shows that of those who were aware of their travel behavior, the majority (73.5%) of telecommuters make fewer trips. The three-year trend shown in Figure 12 is also encouraging—more telecommuters seem to be using their work day at home to make fewer trips.

Mode Choice

This section looks at why commuters choose specific modes, changing commute conditions, parking and employer incentives and changes in home and work location.

Why Commuters Choose Specific Modes

Commute Profile respondents were asked why they use their current commute mode. Table 9 shows the reasons for all respondents and reasons for subgroups based on current mode. "No other way to get to work" was the most commonly cited reason. The top four reasons cited in Table 9 have traded spots from year to year but have always anchored the top part of the list. Convenience and flexibility was the second most frequent response. Because of the generic nature of this response, respondents were asked to explain further what they meant by "convenience and flexibility." Table 10 provides further detail of respondents' meaning.

In most cases, respondents using different modes cite similar reasons for choosing how they get to work. However, there were some notable variations:

Drive alone commuters were more likely to tell us that they had "no other way to get to work." For many of these

commuters that may well be the case. However, it is likely that others feel they have no alternatives because the information on options is not readily available to them. From a demographic perspective, commuters who drive alone tend to be a little older and have slightly above average incomes, however, this group is not significantly different from respondents on the whole. Respondents with irregular work hours or schedules influencing their commute mode choice were also more likely to drive alone.

Table 9

Mode Choice Factors

Reason For Mode Choice	All Modes	Drive Alone	Carpool	Transit	Other
No other way to get to work	20.2%	23.6%	11.9%	16.9%	8.3%
Convenience and flexibility	14.1%	14.3%	11.9%	16.3%	13.8%
Travel time to work	12.6%	11.9%	11.2%	14.4%	22.5%
Work hours/work schedule	11.7%	15.1%	7.3%	1.8%	6.9%
Commuting costs	8.6%	2.8%	16.6%	25.3%	15.7%
Need vehicle during work	7.5%	10.2%	4.2%	0.3%	2.0%
Comfort/relaxation	4.9%	3.5%	4.9%	10.0%	10.3%
Need vehicle before/after work	3.4%	4.6%	2.2%	0.0%	0.5%
Privacy	2.5%	3.2%	2.0%	0.6%	1.0%
Not being dependent on others	2.5%	2.9%	2.3%	1.1%	2.5%
Need vehicle to transport kids	2.3%	1.0%	11.0%	0.0%	0.0%
Come and go as I please	1.3%	1.7%	1.0%	0.0%	0.5%
Stress	1.0%	0.2%	0.7%	3.8%	3.9%
Environmental concerns	0.9%	0.0%	1.4%	2.3%	8.3%
To use HOV lanes	0.8%	0.4%	3.0%	0.6%	0.0%
Enjoy company	0.6%	0.0%	3.6%	0.0%	0.5%
Other	5.0%	4.8%	4.7%	6.4%	3.5%
n=	*3,608*	*2,440*	*514*	*491*	*163*

Transit riders are more conscious of commuting costs than other groups. They are more likely than other groups to cite comfort and relaxation as a choice for selecting that mode. Transit riders are also more likely than other groups to mention reducing stress and minimizing the impact on the environment as a reason for choosing their mode of travel.

Carpoolers, like transit riders, are conscious of commuting costs—significantly more so than drive alone commuters. Transporting children, using HOV lanes and the

Table 10

Convenience and Flexibility

Explanation	All Modes	Drive Alone	Carpool	Transit
Travel time	23.1%	18.0%	22.0%	43.1%
Comfort/relaxation	10.6%	9.1%	11.0%	15.4%
Work hours/work schedule	8.2%	10.8%	4.4%	0.8%
Commuting costs	8.0%	1.7%	16.5%	22.8%
Not depending on others	8.0%	10.8%	3.3%	1.6%
Only way to get to work	7.3%	7.7%	11.0%	2.4%
Come and go as I please	7.0%	10.0%	1.1%	0.8%
Have vehicle before/after work	5.5%	7.1%	6.6%	0.0%
Have vehicle during work	5.5%	7.7%	3.3%	0.0%
Privacy	4.7%	6.4%	1.1%	0.0%
Vehicle to transport kids	2.2%	1.7%	8.8%	0.0%
Stress	1.5%	1.9%	2.2%	0.0%
Get home in emergency	1.1%	1.7%	0.0%	0.0%
Enjoy company	0.8%	0.4%	3.3%	0.8%
Environment	0.8%	0.0%	1.1%	2.4%
Safety	0.1%	0.0%	1.1%	0.0%
Other	5.6%	5.2%	3.3%	9.7%
n=	*624*	*411*	*81*	*105*

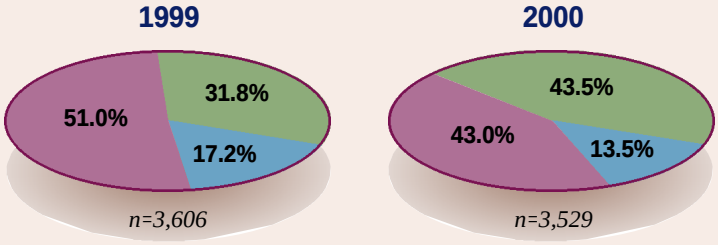
companionship provided by carpool members are other factors that influence carpoolers' choice of mode.

"Other" mode users were more likely to cite travel time to work than respondents from other groups. The additional factor that really stood out for this group was environmental concerns. Like transit riders, "other" mode users are also conscious of a less stressful, more relaxing commute trip.

Respondents who cited convenience and flexibility as the reason for choosing their mode were asked to further clarify what they meant. Convenience and flexibility translated for most respondents into travel time and a mode that provided them the most comfortable, relaxing option (Table 10). In addition to travel time, respondents who normally drive alone value the ability to work around an irregular schedule; they are also conscious of not depending on others and of the ability to come and go as they please. For carpoolers and transit users, convenience and flexibility translated to a less expensive commute. For many carpoolers, convenience and flexibility also meant that it was their only way to get to work.

Figure 13

Commute Conditions



How Commute Has Gotten Better or Worse

Better	n=476	Worse	n=1,534
Moved home/ job location	30.9%	Traffic heavier	73.8%
Traffic lighter	16.2%	Construction delays	8.5%
Changed route	12.8%	Transit slower/ more crowded	6.2%
Roadway improvements	10.8%	Moved home/ job location	3.6%
Changed mode	10.4%	Travel at different time	1.8%
Better transit service	10.2%	Changed route	1.5%
Travel at different time	5.1%	Road work	1.4%
Less road work	1.7%	Changed mode	1.3%
Weather improved	0.6%	Weather worse	0.3%
Other	1.4%	Other	1.7%

Changing Commute Conditions

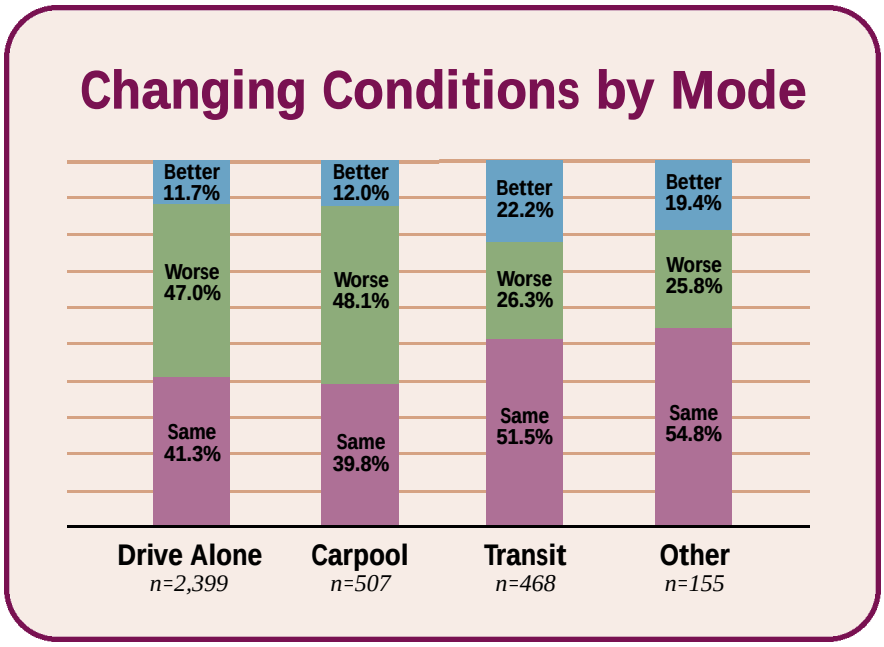
Respondents were asked if their current commute is better, about the same, or worse than a year ago. Most respondents indicated their commute conditions were about the same or worse than they were a year ago (Figure 13). Those who indicated their commute had gotten better were in the minority. Comparing the 2000 results with the 1999 results, there is a noticeable increase in the percentage of commuters who felt their commute has gotten worse.

For those whose commute had improved, a change in home or job location was the dominant reason. Lighter traffic and a change in route were two other reasons cited by a good number of respondents. The percentage of respondents citing less traffic as the reason for their improved commute conditions was significantly lower this year (16.2%) compared with 23.7% in 1999.

For those whose commute has gotten worse, heavier traffic was the clear consensus. This was slightly higher than last year when 70.2% of respondents indicated that traffic was heavier, and significantly higher than two years ago when 58.2% cited heavier traffic. Not that most people need survey results to tell them that commute conditions are getting worse, but the results here point toward a trend of more difficult commutes as a result of heavier traffic.

It is also interesting to look at changing perceptions by mode of travel. "Other" mode and transit users were more likely to say their commutes were getting better. Carpoolers and drive alone commuters were more likely to say their commutes were getting worse (Figure 14). In 1999, carpoolers were more positive about their commute. That was most likely a result of the opening of the new carpool lane on I-80.

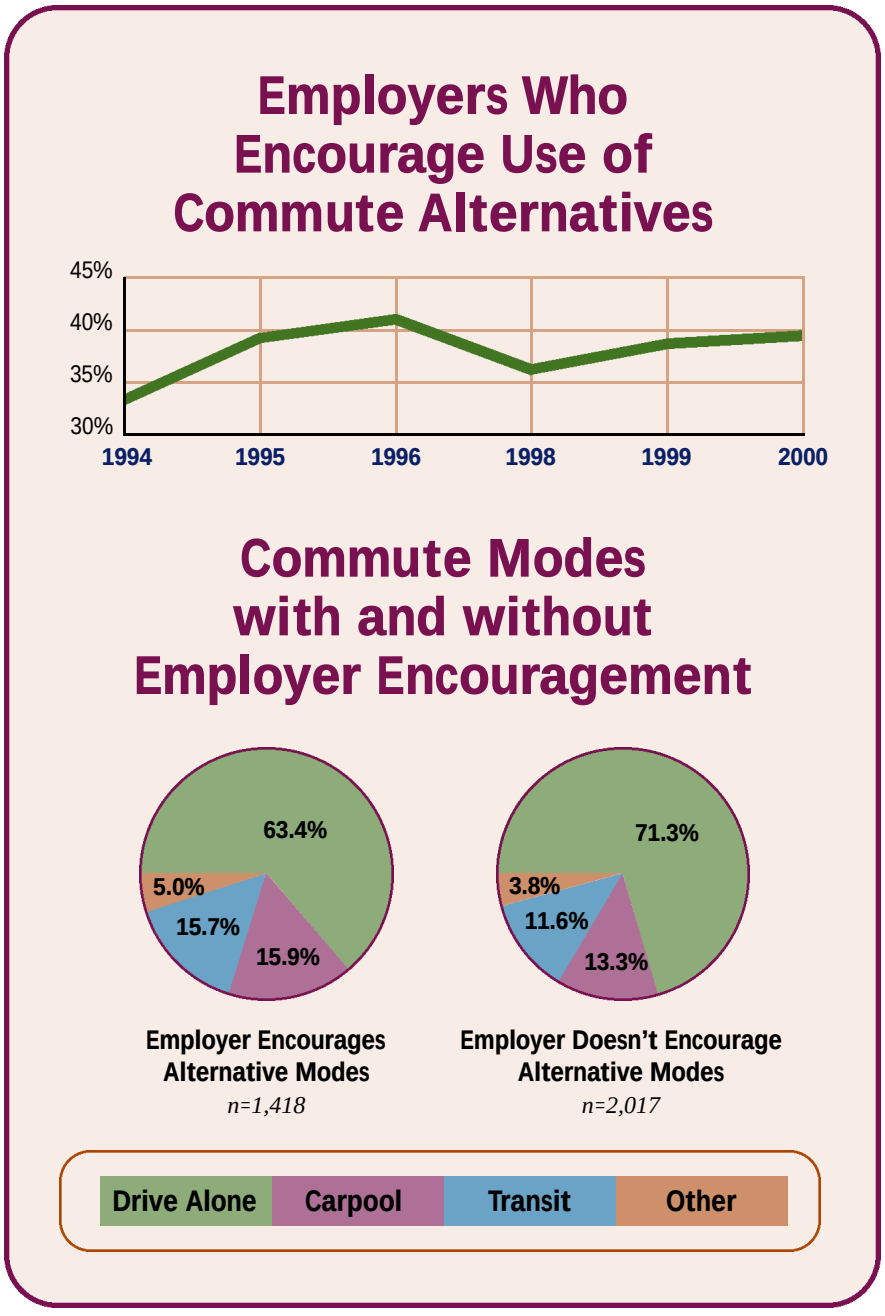
Figure 14



COUNTY COMPARISONS

In most cases, respondents from individual counties did not indicate much difference from the region as a whole. However, there were some exceptions. Respondents from Sonoma were less likely than others to indicate that commute conditions had gotten better—only 9.0%. Santa Clara respondents were also less positive than others about their commute. Only 11.2% indicated conditions had improved, and they were the second most likely group to indicate conditions had gotten worse (46.5%). Respondents from Marin were the most likely to indicate that conditions had gotten worse—48.5% told us their commute

Figure 15



had gotten more difficult. On the other end of the commute conditions spectrum, San Francisco respondents were the most likely to tell us their conditions had improved (16.5%) and the least likely to indicate that conditions had gotten worse (32.0%). The largest group (just under 40%) of the San Francisco respondents who indicated that conditions had improved were bus riders. Muni has been under a good deal of public scrutiny in recent years and the numbers here may be evidence of improvements in the system.

Parking and Employer Incentives

Almost eight out of ten respondents have free all-day parking available at or near their worksite. As explained in earlier editions of Commute Profile, the influence on mode choice of destinations with and without free parking is significant. Although parking is the variable identified here, other conditions associated with parking are likely to have an influence on mode choice. In other words, free parking may not be the causative variable itself—it may simply identify areas with specific characteristics. For example, in areas such as downtown San Francisco where free parking is scarce, there is also more transit service, more amenities within walking distance of offices and significant local congestion.

Locations with free parking have a drive-alone rate of 76.9%, while those without

free parking have a drive-alone rate of 39.2%. Results from past years have shown similar differences between respondents who commute to areas with free parking versus those who commute to areas where one must pay to park. Transit use is even more dramatic. For those with free parking, the transit use rate is 4.8%; for those without, it jumps to 42.1%. Also the use of "other" modes more than doubles in areas without free parking.

Carpooling rates are actually higher in areas with free parking —15.6% versus 10.1% for those without free all-day parking. These numbers again demonstrate that commuters will trade their car for the bus or train given the right combination of incentives (e.g., frequent service) and disincentives (e.g., paid parking).

Over a third of respondents, (39.3%) indicated that their employer encourages employees to use transit, carpool, bicycle or walk to work. This is up slightly from the previous two years (Figure 15). The high point in 1996 was probably a carryover from the Bay Area Air Quality Management District's mandated trip-reduction regulation, which was legislated out of existence in late 1995. Of those employers who encourage the use of alternatives to driving alone, almost 40% of them offer a subsidy for employees who use transit.

Employer programs seem to have some influence on mode choice. However, without the ability to control for all other factors that influence mode choice, it is difficult to accurately quantify the influence. The last two years showed a difference of approximately two and a half percentage points between the drive-alone rate of commuters at companies with and without employer programs that encourage the use of commute alternatives; this year it is almost eight percentage points. This is similar to 1996 when the difference in the drive-alone rate was almost seven percentage points. The 1996 survey was done when the Air District's trip-reduction regulation was still influencing employer programs (i.e., encouraging more active programs). The reason for the larger difference in the year 2000 results is unclear but welcome.

Figure 16

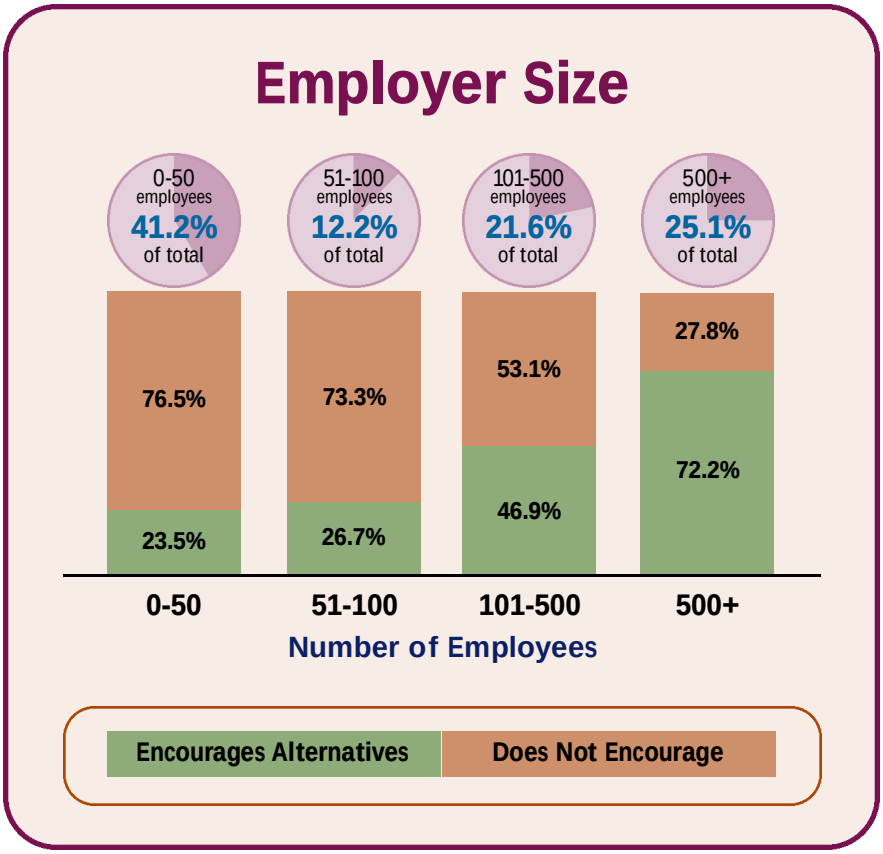


Table 11

Last Changed Home or Work Location

	Residence	Work Location
Less than 1 Year	12.5%	20.4%
1-3 Years	31.4%	36.3%
4-6 Years	16.5%	13.5%
7-9 Years	8.0%	6.5%
10-15 Years	16.6%	13.7%
More than 15 Years	14.9%	9.6%
	n=3,598	*n=3,573*

Four out of ten respondents are employed at companies with 50 or fewer employees; just over half (53.4%) of respondents work for employers with 100 or fewer employees (Figure 16). The likelihood that an employer will operate a program that encourages employees to use alternatives to driving alone increases with employer size. Less than a quarter of companies with 50 or fewer employees operate commute programs while almost three-quarters of large companies (500+) operate commute programs. It is worth noting here that the findings are based on respondents' knowledge of their company's programs, and that there is considerable variation in the content and quality of programs. It is possible that some companies may have programs, but respondents are not aware of them.

Changes in Home and Work Location

When commuters change their home or work location, an excellent opportunity exists to introduce them to alternatives to driving alone. This is the third year the Commute Profile survey has tracked the length of time since individuals last changed home or work locations. The data for all three years are similar. As might be expected, work locations change more frequently than residential locations. Respondents had been at their current work location for 5.8 years and at their current home location for an average of 7.7 years. Table 11 shows that for both residence and work location the most common category is 1-3 years.

Similar to last year there is a spike in the drive-alone rate for commuters who have been at their home locations for more than 15 years (75% drive alone for those over 15 years versus 65% drive alone for those under 15 years). This could be related to age; older commuters are more likely to drive alone than are younger commuters.

Since there have only been minor variations in data collected on the length of time at home and work locations, and this information does not appear to directly impact commute patterns, it will most likely not be collected in future editions of Commute Profile.

Assessing Market Demand

This section discusses past use of commute alternatives and likelihood of future commute alternative use.

Past Use of Commute Alternatives

To find out more about why alternative mode users switch modes, respondents who normally drive alone to work were asked if they had ever carpooled or rode transit to get to their current job. A high percentage (33.9%) indicated that they had carpooled or used transit in the past (this is very similar to previous years).

Those who had carpooled or used transit were asked why they no longer did so regularly. Difficulty finding partners and irregular hours topped the list of reasons why respondents no longer carpooled (Table 12). Over 30% of respondents who could not find partners were unaware of the regional ridematching service. At the top of the transit list, were the statements that it takes too much time and that no service was available. Irregular work hours were cited by a good number of respondents as a reason for not using transit as well as not carpooling.

Likelihood of Future Commute Alternative Use

Respondents who were currently driving alone were asked how possible it would be to carpool, ride transit or bicycle to work at least one or two days a week (Figure 17). Each column is dominated by the "not at all possible" response. Carpooling is the alternative that appeals to the greatest number of people with 26% indicating it is "somewhat" to "very possible." With more than 2 million commuters driving alone throughout the Bay Area, 26% represents approximately 520,000 commuters who feel carpooling is an option for them.

The percentages of respondents indicating it is "very" to "somewhat" possible to carpool or use transit are up from last year. In 1999, about 19% of respondents indicated that it was "very" to "somewhat" possible to carpool and in 2000 this number increased to 26%. For transit the numbers of respondents indicating that it is "very" to "somewhat" possible increased from 13% to 18%. The increased interest in carpooling and using transit may well be related to earlier evidence that indicated congestion was getting worse (i.e., as congestion increases and driving alone becomes more burdensome individuals are more likely to consider alternatives, such as carpooling and transit). If just the respondents who indicated that their commute has gotten worse are selected, the percentage indicating it is "very" to "somewhat" possible to carpool goes up to 29%. The percent interested in transit is essentially the same for those with a worse commute. While no one wants to see congestion get worse, the evidence indicates that if alternatives can be made more attractive on a relative scale, their use will likely increase.

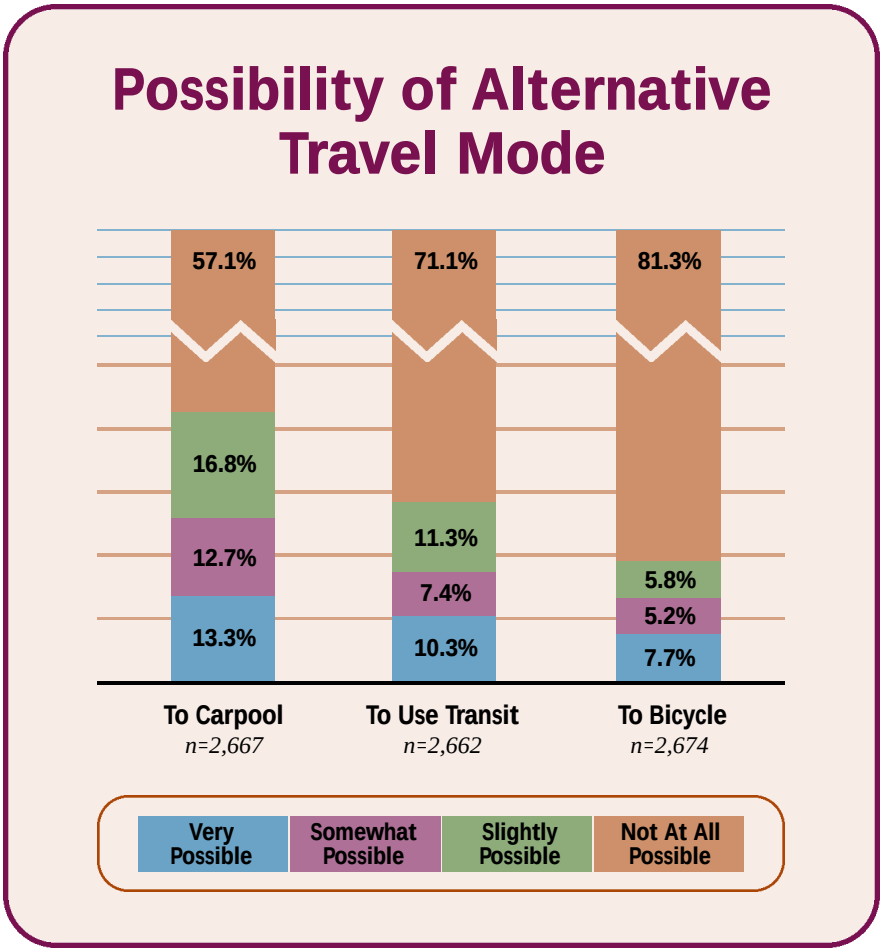
Interest in bicycle use, on the other hand, showed only a very modest increase from 12% to 13%. If the commuters who travel 10 miles or less are selected, the potential bicyclists group (i.e., "very" to "somewhat" possible) goes up to

Table 12

Reasons for Not Carpooling or Riding Transit

Reasons For Not Carpooling		Reasons For Not Riding Transit	
Can't find partners	29.6%	Takes too much time	19.7%
Irregular work hours	22.2%	No service available	17.9%
Need car during work	9.3%	Irregular work hours	14.6%
Takes too much time	8.6%	Prefer to drive alone	9.6%
Prefer to drive alone	6.9%	Need car during work	9.5%
Need car before/ after work	4.5%	Transit unreliable	5.9%
Never considered	4.5%	Never considered it	4.6%
Transport children	3.8%	Need car before/ after work	4.1%
Desire privacy	3.6%	Transport children	4.0%
Work overtime	2.0%	Desire privacy	2.3%
Safety	0.8%	Too expensive	1.9%
Other	4.1%	Work overtime	1.9%
Not Carpooling n=3,204		Safety	1.1%
Not Riding Transit n=3,158		Other	2.9%

Figure 17



17%. Forty-five percent (45%) of Bay Area commuters travel 10 miles or less to work, so this is a substantial number of commuters (over 230,000) who feel bicycling is a realistic alternative.

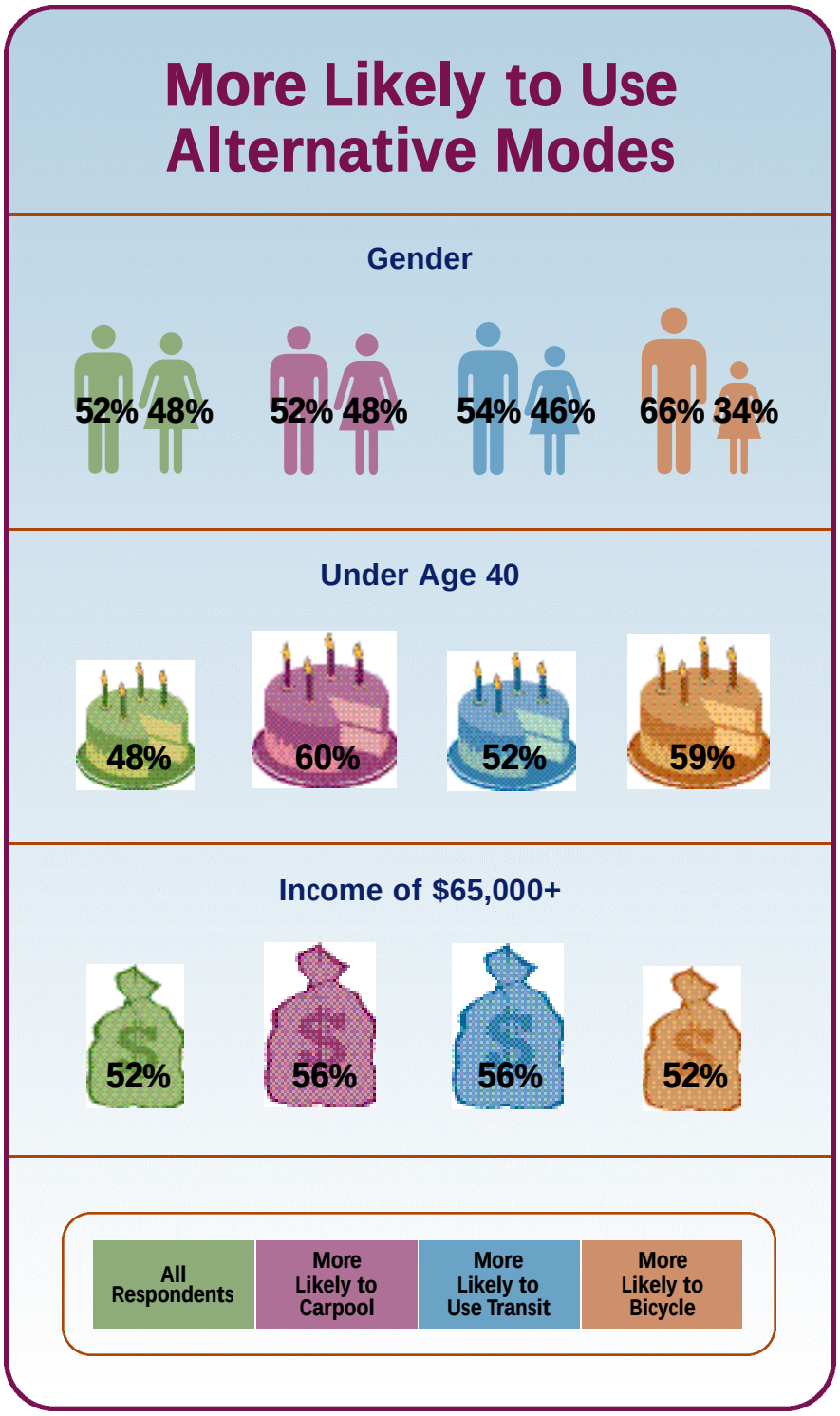
There are some differences between these groups of commuters who are more likely to carpool, use transit and ride bicycles that are worth examining. Understanding the demographics of these groups will allow a targeted approach to market services to them. Demographic variables were examined to determine if they differ from the survey population as a whole (Figure 18).

Commuters who are more likely to carpool tend to be younger. While 48% of all respondents are under 40 years, 60% of the potential carpooler group is under 40 years. Although younger, they tend to have comparable incomes. The difference is relatively small; 52% of all respondents have a household income above $65,000 and 56% of the carpool group has an income above $65,000. From a geographic perspective, respondents more willing to consider carpooling are more likely to be residents of Santa Clara, Solano or Alameda counties.

The gender breakdown for those more likely to ride transit shows that males are slightly more willing to consider transit as a viable option than females. Potential transit riders are also more likely to be on the younger end although not as exaggerated as with potential carpoolers. In terms of income, the transit group was identical to the carpool group having somewhat higher incomes. Fifty-six percent (56%) had household incomes above $65,000 versus 52% of the survey population as a whole. Commuters from Santa Clara, Marin and Alameda counties are more likely to consider using transit than are commuters from other counties.

Commuters who are more likely to try bicycling tend to be younger and male. While 48% of the survey population is younger than 40, 59% of those more likely to consider bicycling were under 40. Even more dramatic is the finding that 66% of potential bike

Figure 18



commuters are male, while 52% of the survey population is male. From a geographic perspective, respondents with an origin of Marin or San Mateo are the most likely to be interested in bicycle commuting. Those interested in bicycling also tended to have much shorter commutes. While the average one-way trip is just over 17 miles, those more interested in bicycle commuting averaged less than 8 miles

With the exception of 1999, there is a fairly steady decline in the number of respondents who indicate that it is "not at all possible" to carpool (Figure 19). In 1999, respondents were also more optimistic about their commute conditions. As noted earlier there may well be a connection between worsening commute conditions and the likelihood that respondents will consider the use of an alternative to driving alone. While the resumption of the downward trend in those who consider carpooling out of the question is welcome, the real challenge is translating the improved attitude into changed behavior. In other words, what needs to be done to create a commensurate shift in the number of respondents using alternatives to driving alone?

Along these same lines, a more positive attitude toward carpooling was noted when

respondents were asked if they would be willing to take a carpool passenger if it changed their trip by less than five minutes. Almost half (48.5%) of those who currently drive alone indicated they would be willing to do so. This is similar but slightly higher than results from previous surveys.

Influence of Park & Ride Lots

New to Commute Profile this year was a question that asked commuters who were currently driving alone if a lot to park their car and meet a bus or carpool were available would they be more likely to use a bus or carpool? For most respondents (67%), the availability of a park and ride facility would not influence their mode choice. However, almost 30% of respondents indicated that they would be more likely to use a bus or carpool if such a facility existed.

To examine where in the region this type of facility might be most appreciated, the responses are shown on a county-by-county basis in Table 13. The variation from county to county is minimal but San Francisco and Marin stand out at the higher end and San Mateo at the lower end.

Figure 19

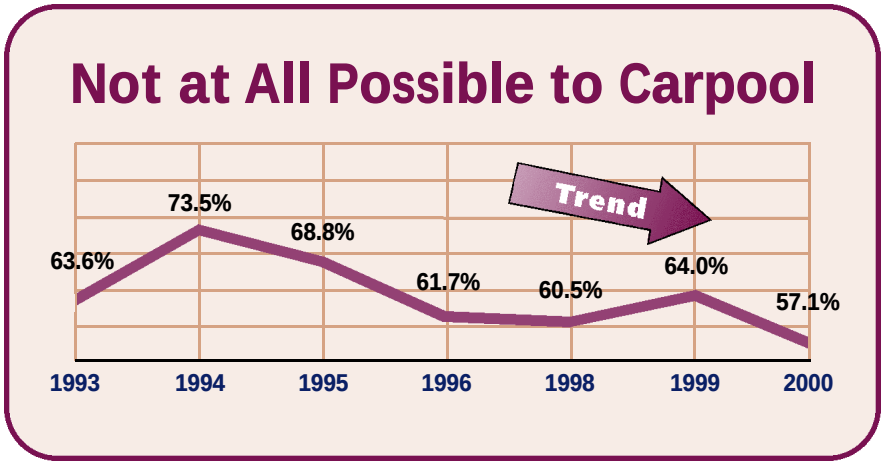


Table 13

Influence of Park & Ride Lot on Mode Choice

County	More Likely to Use Bus or Carpool	No More Likely to Bus or Carpool	Don't Know
Alameda	29%	68%	3%
Contra Costa	30%	67%	3%
Marin	31%	66%	3%
Napa	29%	68%	3%
San Francisco	37%	56%	8%
San Mateo	25%	72%	4%
Santa Clara	30%	65%	5%
Solano	28%	70%	1%
Sonoma	27%	70%	3%
Region	**29%**	**67%**	**4%**

Awareness of Commute Services

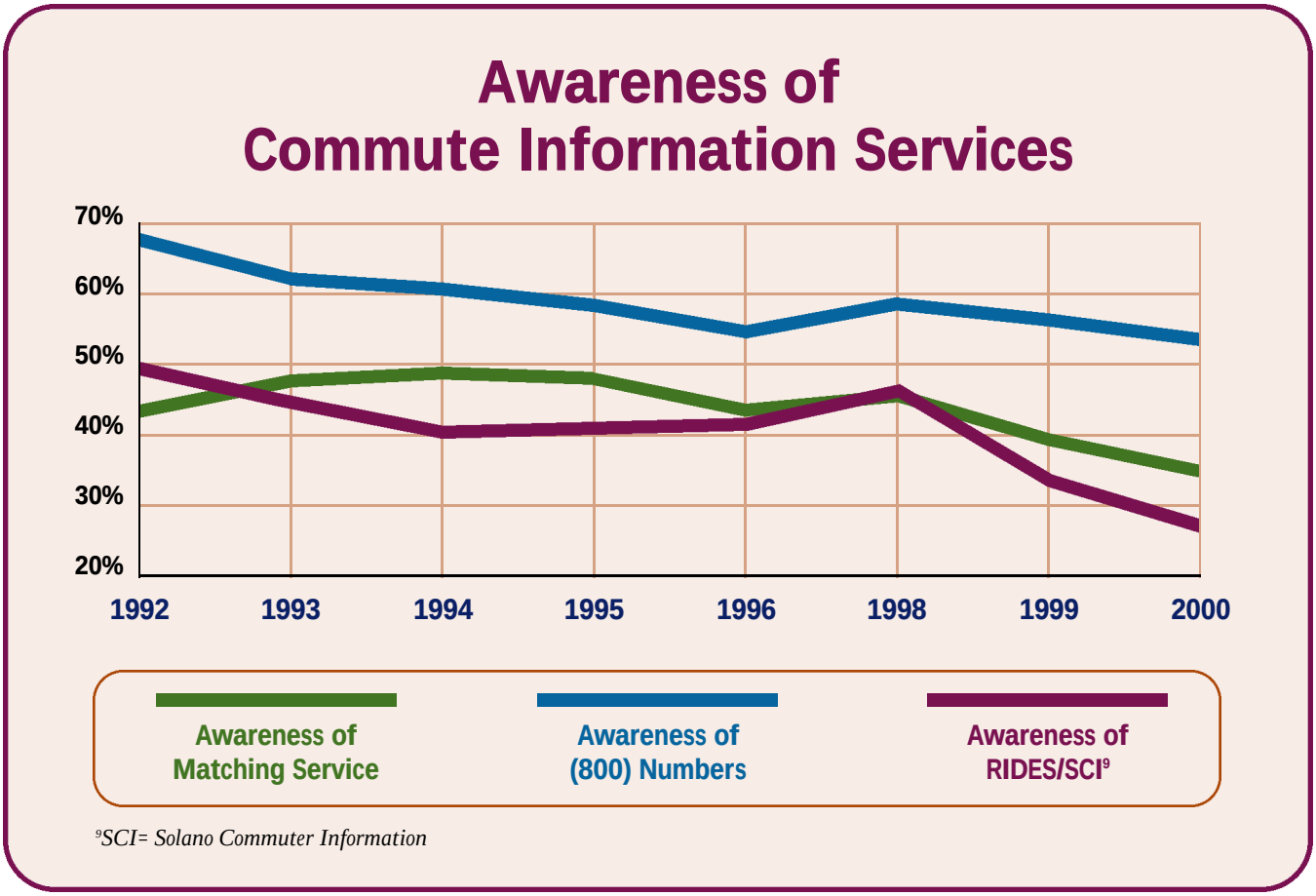
This section gauges commuters' awareness of the Regional Ridesharing Program, its (800) POOL phone numbers, the TravInfo® service and its 817-1717 phone number.

Respondents were asked if they were aware of a free service that would provide them with a list of potential carpool partners. Awareness of the Matchlist service appears to have peaked in 1994 when it was at 48.3%; dropped substantially in 1999 and continued to decline in 2000 (Figure 20).

Questions on awareness of carpool information numbers (755-POOL for RIDES and 53-KMUTE for Solano Commuter Information) were also included in the survey. The highest level of awareness recorded was in 1992. The level of awareness of the phone numbers has not changed substantially since 1995; if anything, the data from the 2000 survey supports a moderate decline since the survey began. Although specific evidence is not available to support this assumption, one factor that may be influencing awareness of the 800 numbers is the introduction of the 817-1717 as an alternative or option for accessing carpool information. All RIDES' promotional literature currently features both numbers.

Of those who were aware of the 800 numbers, 8.5% had

Figure 20



[9]*SCI= Solano Commuter Information*

contacted one of them. This is down from last year when 11.6% had contacted them, and up from two years ago when only 6.6% had contacted the 800 numbers. These estimates from the last three years provide us with a range of 6.6% to 11.6% of the current commuting population having contacted the 800 numbers or between 230,000 and 400,000 commuters.

The survey included questions to see if respondents were familiar with the region's TravInfo® transit and traffic phone number 817-1717. The percentage of respondents familiar with the 817-1717 number (8.4%) was significantly lower than those familiar with the (800) 755-POOL number. This is not surprising given the 817-1717 service is relatively new in the Bay Area. Awareness is also down a bit from the last two years. In 1999, awareness was at 10.8% and in 1998 12.8% of respondents indicated they were familiar with the transit and traffic number.

The decline identified this year is particularly curious because there was an advertising campaign in progress at the time of the survey which included billboards (in San Francisco, Alameda, San Mateo and Santa Clara), magazine ads, Web ads, radio announcements and e-mail. There has also been increased use of the 817-1717 number on a variety

of promotional literature. A change in the wording of the questions may also have influenced results. Previous surveys asked respondents if they had "heard of the traffic and transit number 817-1717." This year's survey did not include "traffic and transit" in the wording. Those who had heard of the 817-1717 number were asked to describe the type of information available on it. Just under half (47%) could not describe the type of information available. For those who could identify the type of information available, 19% indicated that information on transit was available, 18% indicated that traffic information was available and 12% identified carpool information.

Respondents were asked if they had heard of an organization called RIDES for Bay Area Commuters or Solano Commuter Information (SCI) depending on their county of origin. Awareness again dropped significantly from the previous year. The 1998 number was inflated by a BART strike, which happened about five months before that survey and provided a great deal of media exposure for RIDES and SCI. However, the 27.4% level of awareness recorded in 2000 is the lowest to date.

Most who knew of RIDES or SCI had heard about them through the media (Table 14). Publicity at work, freeway signs, and friends or co-workers were other significant sources among those who could remember where they learned of the Bay Area's ridesharing programs.

Table 14

How Commuters Heard of RIDES

	RIDES	SCI
Media	42.0%	35.5%
At work	10.9%	11.8%
Freeway sign	15.3%	10.5%
Friend or co-worker	8.4%	13.2%
Direct mail	2.0%	2.6%
Saw vanpool	4.2%	0.0%
Transit agency	2.2%	3.9%
Community event	1.9%	3.9%
Local agency/city	1.9%	1.3%
School	0.6%	0.0%
Other	0.8%	6.6%
Don't remember	8.5%	6.6%
	n=915	*n=76*

COUNTY COMPARISONS

Awareness of RIDES and Solano Commuter Information varies considerably from county to county (Table 15). Solano County has the highest level of awareness (35.0%); the lowest level of awareness was recorded in Napa County (11.3%). Awareness of the POOL numbers varied little from county to county; Napa County was again lower than the other counties. Awareness of the 817-1717 number also varied from county to county. It was significantly higher in Alameda County in particular. This is consistent with results from the 1999 survey that also showed awareness in Alameda County higher. AC Transit, which serves much of Alameda

Table 15

Awareness of Services (by county)

	RIDES/ SCI	POOL Numbers	817-1717
Alameda	28.3%	53.8%	15.5%
Contra Costa	27.0%	55.8%	7.8%
Marin	28.5%	53.5%	5.3%
Napa	11.3%	40.3%	6.3%
San Francisco	27.5%	52.3%	8.5%
San Mateo	27.5%	53.8%	7.5%
Santa Clara	25.8%	53.5%	4.5%
Solano	35.0%	52.5%	6.3%
Sonoma	30.0%	54.0%	5.3%

County, uses the 817-1717 as its primary information; this may partially account for the higher level of awareness. Santa Clara on the other hand was particularly low.

Internet Access

The Internet is a valuable tool for the dissemination of information. For the first time in the Commute Profile series, respondents were asked the most convenient way for them to access information about transit schedules or traffic conditions. The Internet was the most popular option with over 40% of respondents mentioning it. Other popular options were radio updates (25%), telephone information (10%) and television updates (10%).

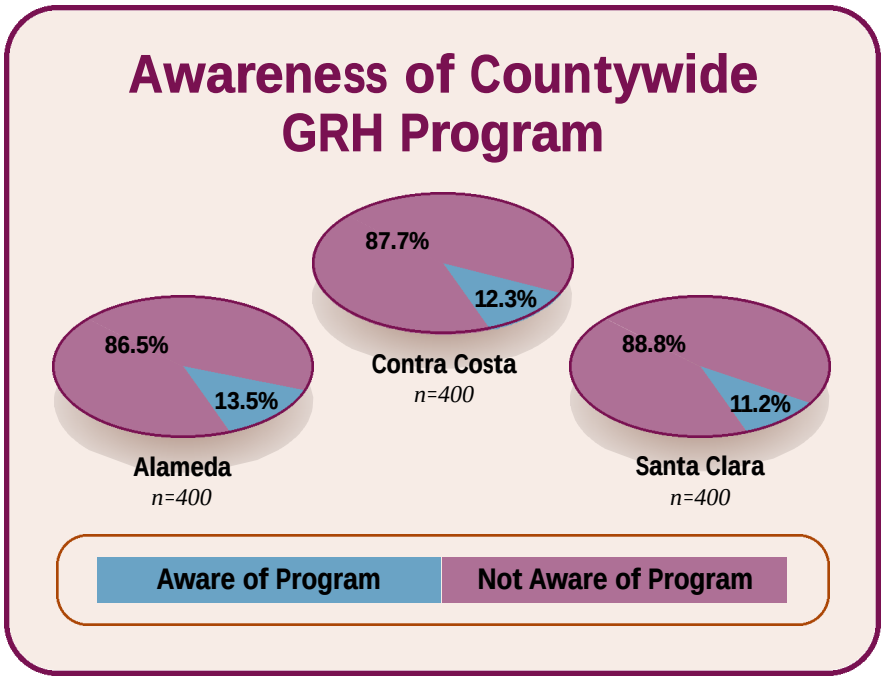
More than eight out of ten (83%) commuters have regular access to the Internet (Table 16). This is up sharply from last year when 71% of respondents reported having regular Internet access. For the second year, the Commute Profile questionnaire included a series of questions designed to determine the role of the Internet in commute decisions. Awareness of transit, carpool and traffic information on the Internet is also up significantly from last year. In 1999, 24.9% of respondents reported being aware of this information and in 2000 it jumped to 37.5%. Also up is use of the Internet for transit and traffic information. Last year 9.8% of commuters reported using it infrequently or once or more a week and this year 14.2% reported doing so. Most of the increase has come from individuals who use it on a regular basis (i.e., once or more a week). Usage has almost

Table 16

Use of Internet for Travel Decisions

Have Internet access *n=3,004*	83.3%
Aware of transit, carpool, and traffic information on the Internet *n=1,352*	37.5%
Use for transit/ traffic information infrequently (less than once a week) *n=257*	7.1%
Use for transit/ traffic information once or more a week *n=257*	7.1%

Figure 21



doubled for this group. The percentage of regular users increased from 3.4% in 1999 to 7.1% in 2000.

COUNTY COMPARISONS

There is some notable variation in Internet access at the county level. San Francisco (87%) and Santa Clara (85%) have the highest levels of Internet access. Napa and Solano have the lowest levels of access (74%). Awareness of transit, carpool and traffic information is highest among residents of San Francisco, Alameda and Contra Costa counties and lowest among residents of Napa and Marin counties. Interestingly, awareness in Santa Clara was actually a little below average. San Mateo and San Francisco respondents were most likely to use the Internet for transit, carpool and traffic information, but the variation between counties was relatively small.

Guaranteed Ride Home Program Awareness

Alameda, Contra Costa and Santa Clara counties have Guaranteed Ride Home programs that are available to segments of the working population within those counties. Guaranteed Ride Home programs offer users of commute alternatives a pre-paid ride home in an emergency through a taxi or rental car service. The Commute Profile sample is selected based on county of origin so it is not a perfect tool for evaluating programs that are primarily destination based. Awareness varied little from county to county with Alameda residents having the highest level of awareness and Santa Clara the lowest (Figure 21). The Santa Clara program is the most limited in scope; it is available only to individuals who participate in the Eco Pass program.

Tax Break and Commuter Check® Awareness

Respondents were also asked if they were aware that they could receive a tax break for using public transit, and if they were aware of Commuter Check® transit vouchers. The tax break was a reference to the "commuter choice" legislation that allows individuals to use a limited amount of pre-tax income to purchase transit tickets. Approximately 16% of respondents indicated that they were aware of the tax break. Commuter Checks® are transit vouchers that are purchased by employers and passed on to employees to pay for transit or vanpool fares. About 19% of respondents indicated they had heard of the Commuter Check® program.

Conclusions

This section summarizes some of the more interesting findings from the survey.

This is the eighth edition in the Commute Profile series. The objective of the series is to track and analyze commuting behavior and trends of Bay Area residents.

Mode, Distance and Time

The variation in commute mode between 1999 and 2000 was the smallest recorded to date. With the exception of 1998 where the drive-alone rate increased substantially, the data from the 2000 survey support a relatively flat trend with only small variations in mode use. The jump in 1998's drive alone rate may well have been a result of the very wet weather that preceded the survey period.

Commute distance was almost identical to the distance recorded in 1998. Despite a small drop in 1999, the long-term trend is one of slightly increasing distance. Commute distance appears to influence mode choice. Commuters traveling five miles or less to work are the least likely to drive alone or carpool and the most likely to use transit, bicycle or walk. Those traveling between 6-10 miles are the most likely to drive alone, and long distance commuters (41 miles or more each way) are the most

likely to carpool. Some of the region's longest commutes are not included in the Commute Profile survey because it includes only the nine counties at the region's core and does not include commuters coming from Stanislaus, San Joaquin and other counties at the periphery of the region.

The estimated time saved using a carpool lane increased considerably from last year. Commuters who use carpool lanes on their journey to work estimate that they save almost 21 minutes. The increased time saved is consistent with other findings that show commutes in general getting slower. Based on respondent's perception of their commute, the average travel time increased by almost 15% in the last year from 30 minutes to 34 minutes each way. The travel time advantage of carpool lanes may well be increasing as congestion in the mixed-flow lanes worsens.

Incentives

Carpool lanes also appear to influence commuters' choice of modes. Sixty percent of respondents who were currently using a carpool, vanpool or bus indicated that the carpool lane had influenced their choice of travel mode. Of those who regularly use the carpool lane, only 20% indicated that they would continue to use an HOV mode if the carpool lane did not exist. In other words, most of those currently using carpool lanes would reconsider their travel mode if these lanes were not available and potentially become solo drivers.

Driving alone for most people is the option that is the easiest, fastest and the most reliable. The fact that almost seven out of ten commuters drive their car by themselves each day is a testament to the advantages of driving alone. The data collected here, however, that show a much lower rate of driving alone for commuters who work in areas where free parking is not available provides some insight. Although parking is the variable identified here, it is most likely a combination of conditions associated with parking that together change the attractiveness of driving alone. Modifying the region's infrastructure to discourage driving alone is a difficult and long-term challenge, but based on the evidence here one that has merit.

Employer-based commute programs have been at the heart of the approach to marketing the Regional Ridesharing Program since its inception. Both the percentage of employers operating programs (based on respondent's awareness of their employer's programs) and the effectiveness of these programs (as measured by the difference in the drive-alone rate for commuters at companies with and without programs) increased this year. The data also clearly show that larger employers are much more likely to operate programs.

Commute Conditions

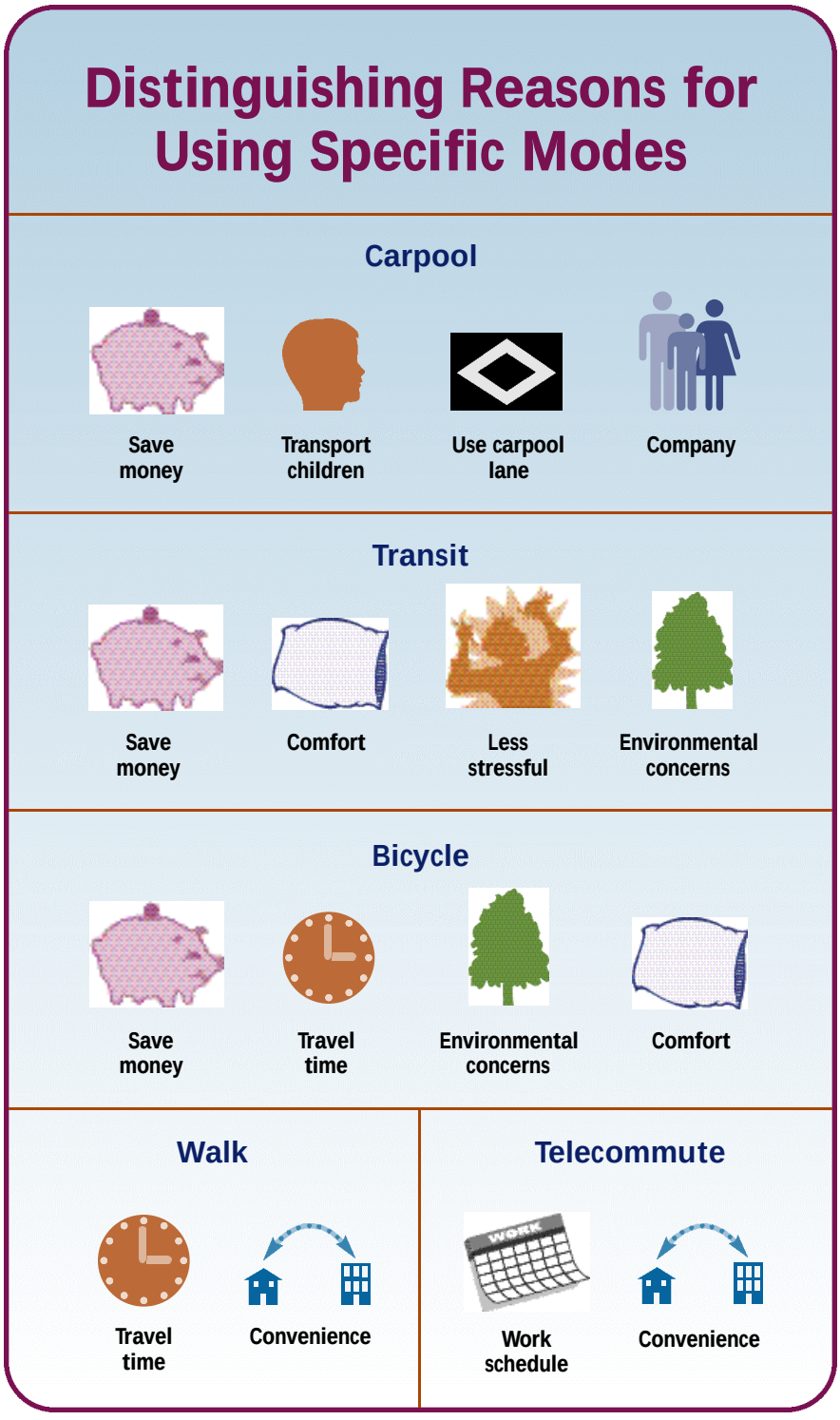
Commute travel speeds have reached an all time low—commuters now average less than 30 miles per hour. As an indicator of the region's commute conditions, respondents to Commute Profile were asked if travel conditions were better, worse or the same as a year ago. The percentage of commuters indicating that their commute conditions had gotten worse increased significantly in the last year. Given the growing employment and population of the region and limited resources for expanding the region's transportation capacity this doesn't come as much of a surprise. The positive finding associated with worsening travel conditions is what appears to be an increased willingness of respondents to try options to driving alone. Since there has not been an increase in use of commute alternatives, it appears that congestion creates latent demand for transit and carpooling. The challenge is to introduce sufficient incentives

into the system to convert the latent demand to increased use of alternatives to driving alone. This hypothesis can perhaps be tested in more detail next year.

Market Segments

Commute Profile provides a sense for which modes hold the most promise and which segments of the population are most likely to be interested in the use of alternatives. Some basic demographic information can be used to target specific segments of the population for specific modes. Carpooling, transit and bicycling (in that order) are the options that respondents find most appealing. Those more interested in carpooling tend to be younger and to have slightly higher than average incomes. They are also more likely to reside in Santa Clara, Solano or Alameda counties. Commuters with a higher level of interest in transit are more likely to be male, somewhat younger and have slightly higher than average incomes. They are more likely to reside in Santa Clara, Marin or Alameda counties. Commuters with a higher level of interest in bicycling are much more likely to be male and much more likely to be younger than the average commuter. Residents of Marin and San Mateo counties are the best

Figure 22



targets from a geographic perspective.

In addition to knowing which segments of the population are most likely to try options to driving alone, it is useful to know why specific modes appeal to those who use them (Figure 22). Carpool users are more likely to cite saving money, transporting children, using the carpool lane and desiring company as the reason for choosing that mode. Transit users are also motivated by costs. In addition, they cite comfort, reduced stress and concerns for the environment. Travel time is important to both bicycle commuters and walkers, while telecommuters' choices are motivated primarily by their work schedule.

Awareness

Awareness of a matching service, awareness of RIDES, and awareness of the 800 phone numbers all continue to decline. Awareness of these key program components peaked several years ago when RIDES had a significantly larger budget and the Air District's trip-reduction ordinance was in effect. Larger budgets and region-wide mandated trip-reduction programs are difficult to replicate. Without those resources, a new strategy is needed to reverse the trend of decreasing awareness.

In addition to awareness of RIDES and the Regional Rideshare Program, the Commute Profile survey also examined awareness of other related programs. One of the big surprises was a decline in awareness of the region's TravInfo® transit and traffic phone number, 817-1717, despite increased exposure over the last year. Awareness of Guaranteed Ride Home programs, Commuter Choice and Commuter Check® were the other related programs examined. Commuter Check® had the highest level of awareness, but all three were below 20% indicating there is still a significant need to inform commuters of these incentives.

Raising the level of awareness is a big challenge given the competition for consumers' attention from products and services with the resources to make themselves heard. The Commute Profile survey points us to a relatively new tool that can be used to raise awareness —the Internet. Access to the Internet and its use for transit and traffic information is up significantly; eight of ten commuters now have regular Internet access. This is an information dissemination tool RIDES and others should explore in greater detail.

Section Two:

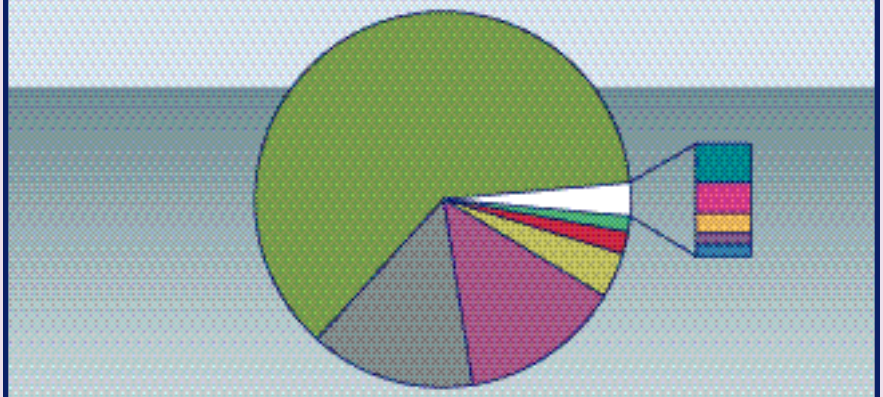
County Profiles

County Profile: Alameda

Alameda County residents have the second-lowest drive-alone rate in the region (Figure 23). Transit-rich San Francisco has the lowest drive-alone rate. For both counties, the key factor in the low drive-alone rate is high transit use. Not coincidentally, Alameda County is particularly well-served by transit; residents can use BART, AC Transit, ferries and, most recently, the Altamont Commuter Express. Moreover, a good amount of the employment in Alameda

Figure 23

Primary Commute Mode



- ▲Drive Alone 62.0%
- ▲BART 14.3%
- ▲Carpool 14.0%
- ▲Bus 4.0%
- ▲Bicycle 1.8%
- ▲Telecommute 1.3%
- ▲Walk 1.0%
- ▲Ferry 0.8%
- ▲Motorcycle 0.5%
- ▲Caltrain 0.3%
- ▲ACE Train (Altamont Commuter Express) 0.3%

n=400

Table 17

Alameda Clustered Modes over Time

	1993	1994	1996	1999	2000
Drive Alone	62.1%	65.8%	64.8%	62.3%	62.5%
Carpool	14.3%	16.3%	15.3%	15.6%	14.0%
Transit	16.6%	12.5%	13.2%	18.4%	19.5%
Other	7.0%	5.6%	6.8%	3.7%	4.0%

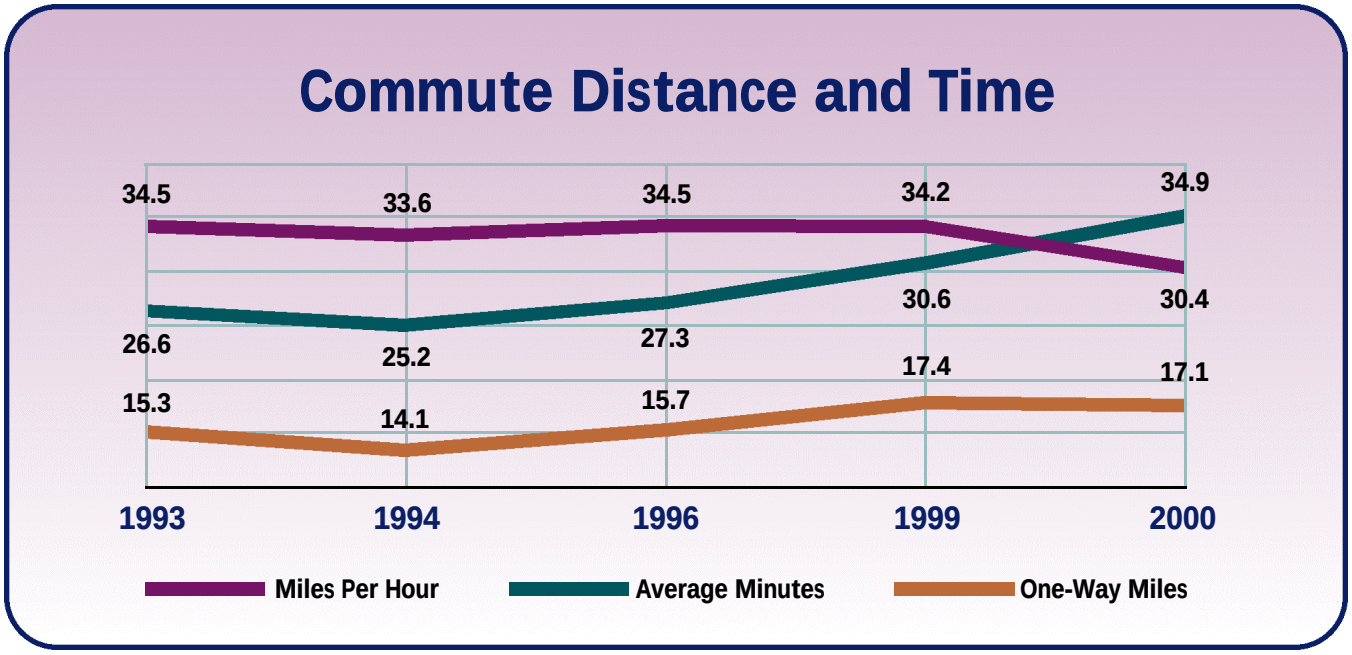
County is located near transit lines in Oakland and Berkeley.

The drive-alone rate in Alameda County has decreased from a high of 65.8% in 1994 to 62.5% in 2000 (Table 17). Over the same time period, the use of transit climbed from 12.5% to 19.5%. The level of carpool use has been fairly consistent with only minor ups and downs.

Commute Distance and Time

Figure 24 shows that the average miles per hour dropped

Figure 24



dramatically between 1999 and 2000. This may be partially related to the increase in transit use. Transit typically takes longer than driving; the high level of transit use in Alameda County may be one of the factors influencing this trend.

Changing Commute Conditions

Opinions about the commute among Alameda County residents mirror the region as a whole (Figure 25). A few people think the commute is getting better, and the top reason among that group is that they changed their commute by moving or by getting a new job. In other words, people are unlikely to say the commute is improving because traffic is lighter.

Among the reasons for the commute getting worse, more traffic, construction delays and crowded transit topped the list. Because Alameda County residents rely so heavily on transit, particularly BART (which has recently posted record ridership levels), this complaint is not surprising.

Use of Commute Alternatives

Compared to residents of the region as a whole, Alameda

Figure 25

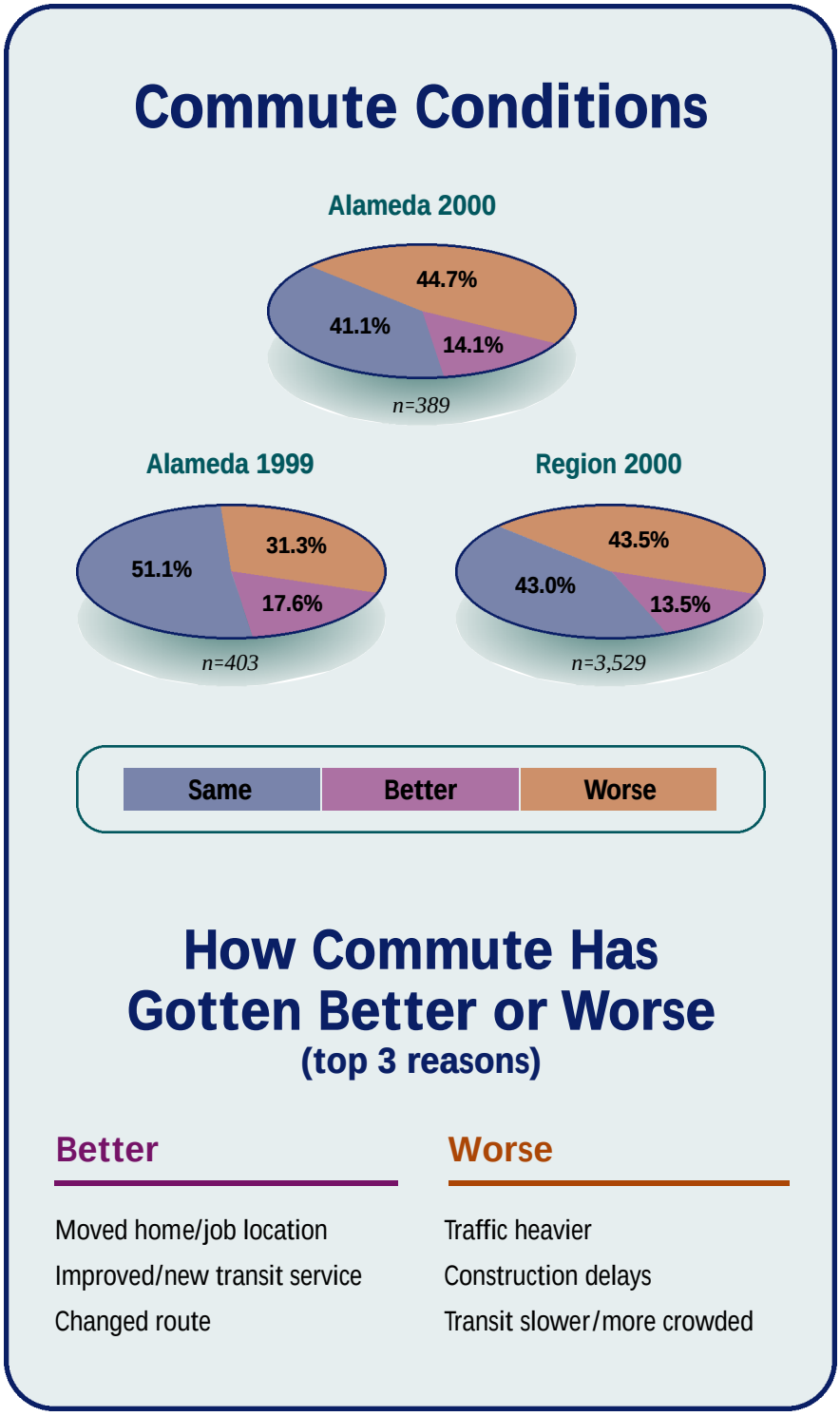
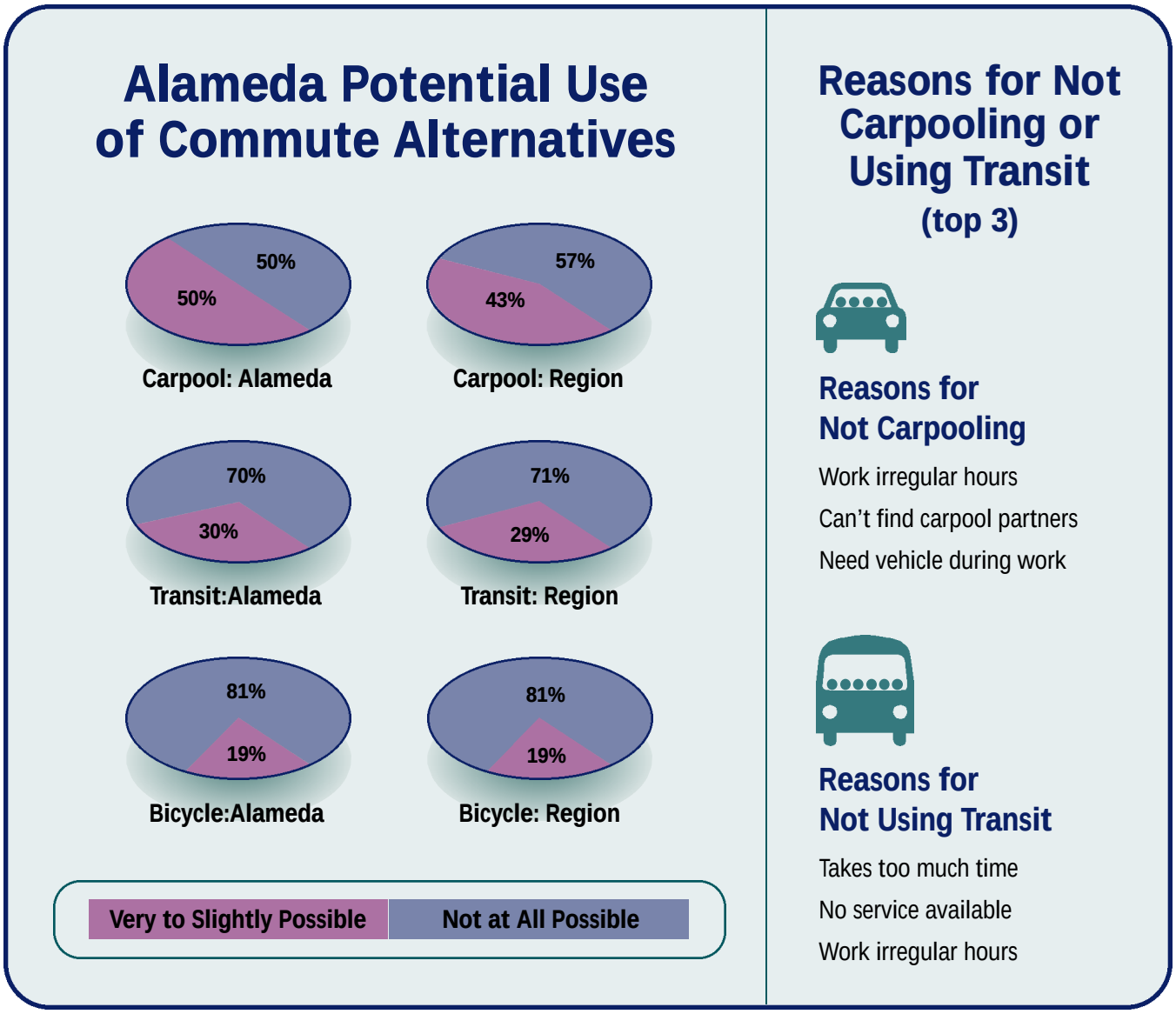


Figure 26



County residents are more likely to say they could carpool (Figure 26). Alameda County residents have the option to "casual carpool," a choice which is only available in a few locations outside the county. More than one-quarter (28%) of those who carpool reported that they were casual carpooling.

Irregular hours tops the list of reasons why Alameda County residents aren't able to carpool. For those considering transit, the additional time required to make the trip by transit is the major deterrent. ●

County Profile: Contra Costa

The drive-alone rate among Contra Costa County residents is lower than the regional average (65.0% compared to 67.6%). The incidence of carpooling and vanpooling is among the highest in the region (Figure 27). In Contra Costa County, employers tend to be spread out, often at business parks with ample free parking and relatively little transit. However, many Contra Costa County residents work in San Francisco, which explains why the rate of BART use is so high. Long commute distances from outlying suburbs and HOV facilities leading to the Bay Bridge and at the toll plaza make vanpooling popular.

The rate of transit use has

Figure 27

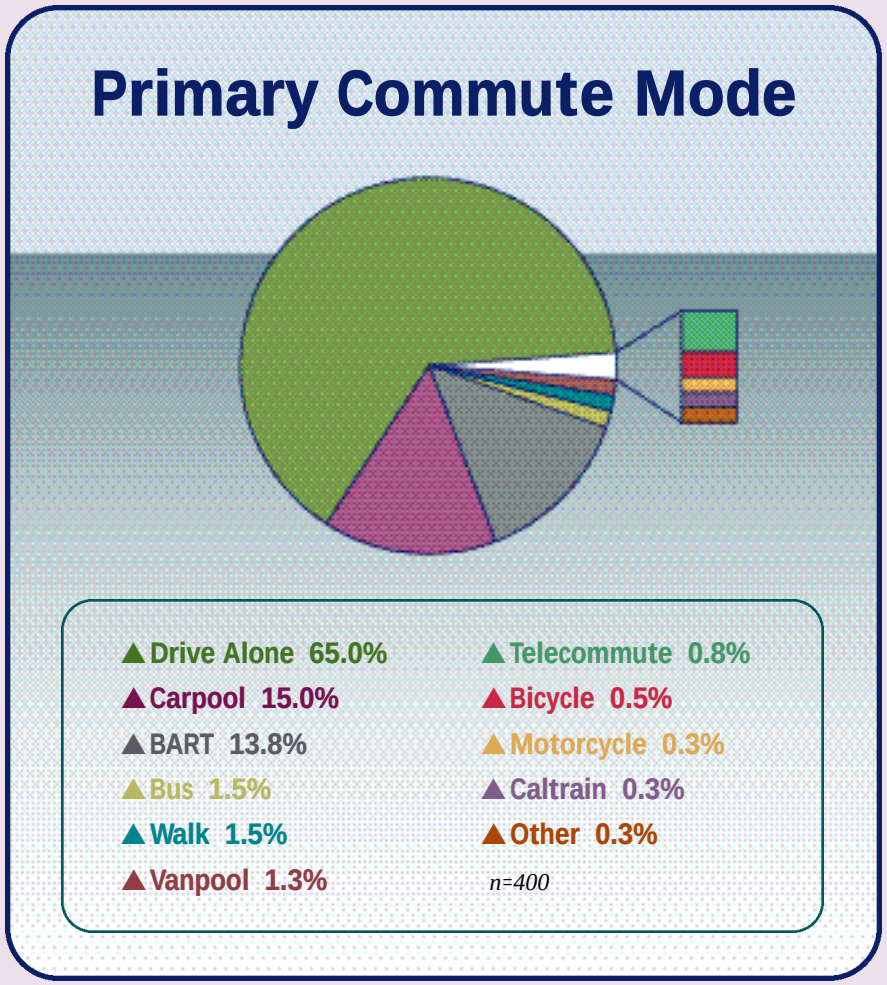


Table 18

Contra Costa Clustered Modes over Time

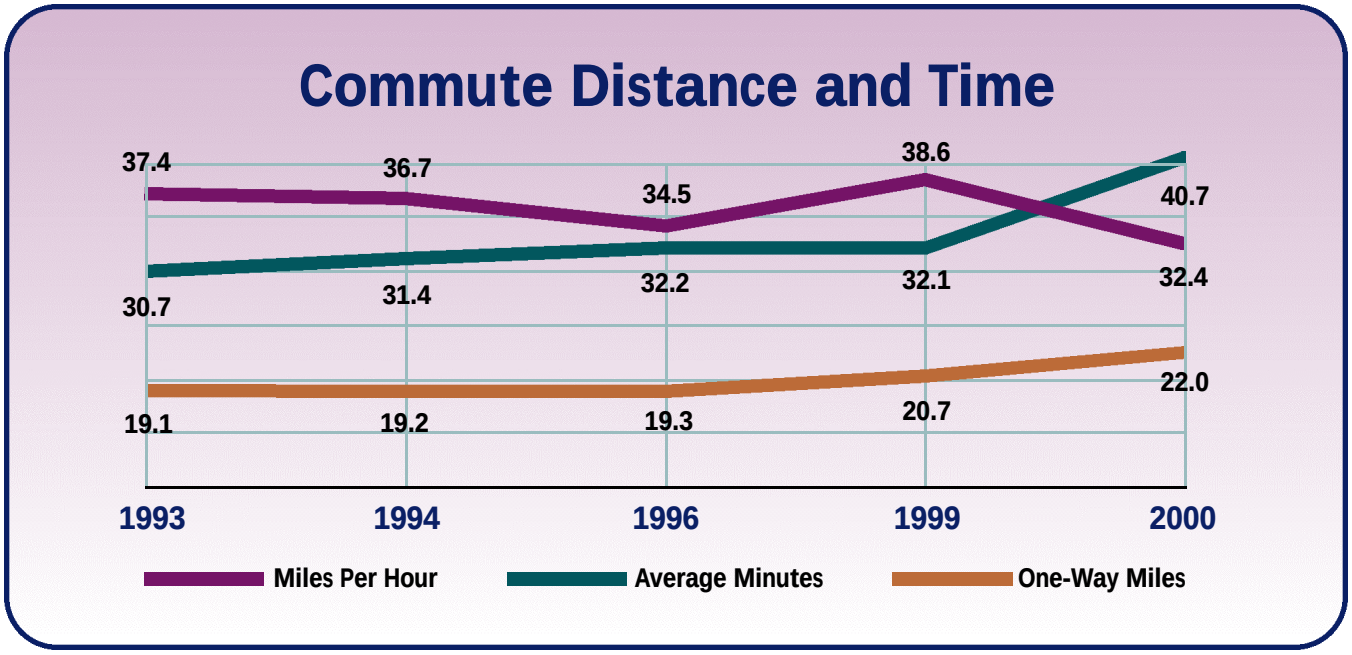
	1993	1994	1996	1999	2000
Drive Alone	63.5%	69.0%	66.8%	65.5%	65.5%
Carpool	21.6%	17.3%	16.5%	13.3%	16.3%
Transit	12.1%	11.6%	15.0%	15.5%	15.5%
Other	2.8%	1.8%	1.7%	5.1%	2.8%

increased modestly over time, while carpooling and vanpooling have fluctuated (Table 18). In 1999, the use of "other" modes increased and carpooling decreased without any apparent reasons. The 2000 commute modes are more in line with previous years. Contra Costa County residents also have the option to "casual carpool." Among those who carpool, one-fifth (19%) are casual carpooling.

Commute Distance and Time

Contra Costa County commutes tend to be longer both in

Figure 28



distance and time (Figure 28). The average commute time increased significantly between 1999 and 2000. Since 1993, the average commute time increased by 10 minutes, but the average commute distance increased less than three miles. The slow down in the average miles per hour could be explained by an increase in the use of "slower" commute modes, such as walking and bicycling. There is no evidence of an increase of these modes in Contra Costa. The decrease in average miles per hour is largely due to congestion.

Changing Commute Conditions

Contra Costa County commuters are slightly happier about their commute than the region as a whole (Figure 29). The primary reason for saying the commute is better is "roadway improvements." Presumably this is primarily related to completion of the 680/24 interchange improvements.

Use of Commute Alternatives

Contra Costa County residents appear to have made up their minds about their commute modes (Figure 30). While they are more likely than the regional

Figure 29

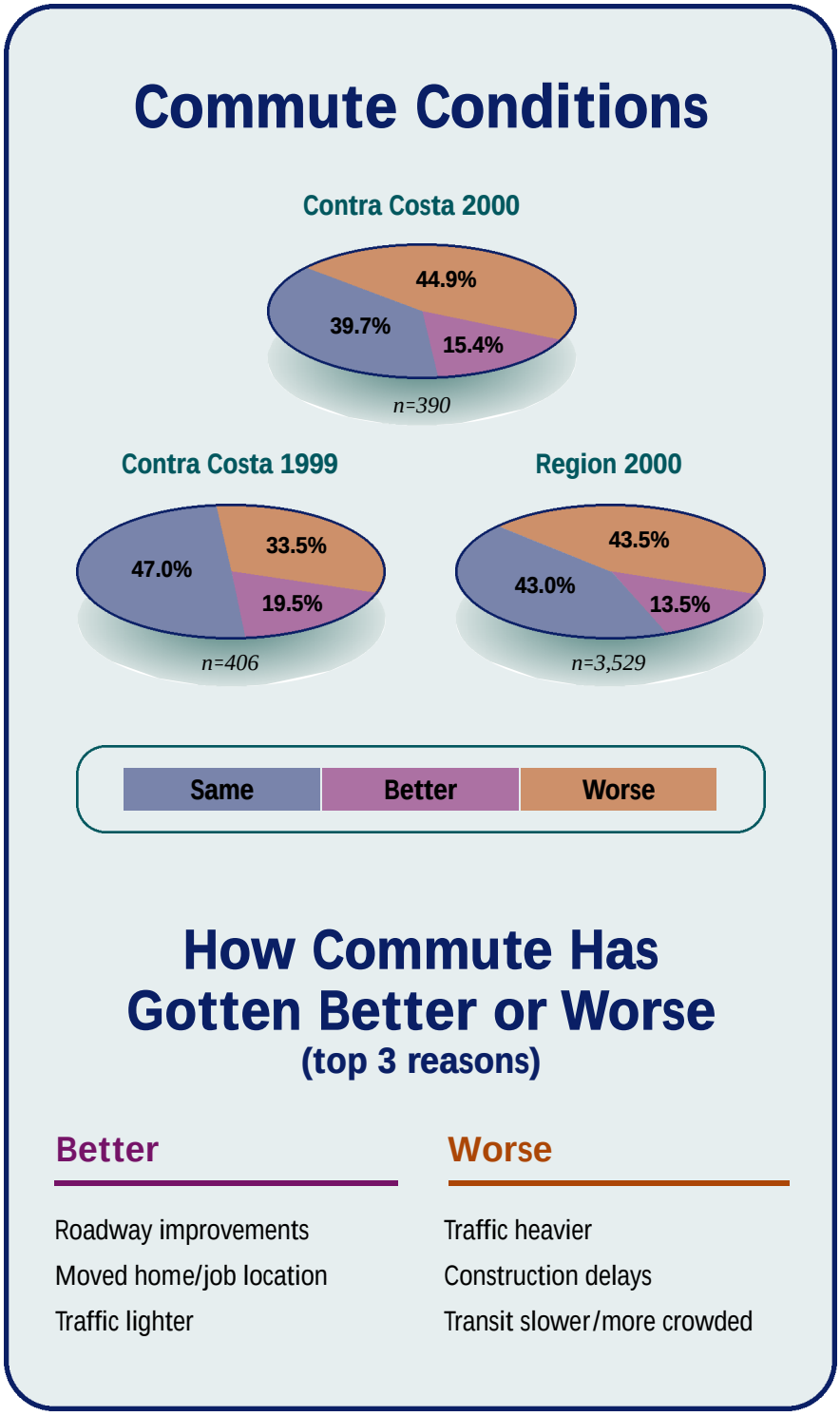
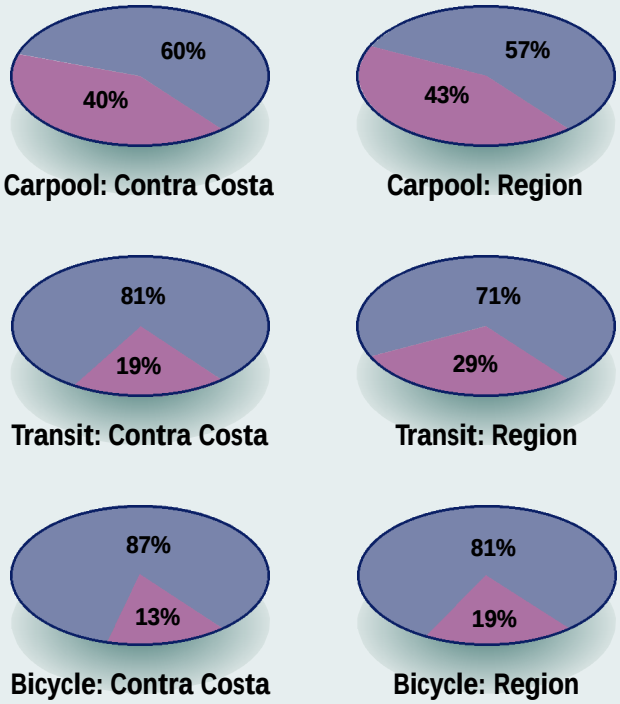


Figure 30

Contra Costa Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Takes too much time

Reasons for Not Using Transit

Takes too much time

No service available

Work irregular hours

average to use transit, they are less likely to be willing to consider transit (if they do not already use it). Figure 30 shows that the second most common reason for not using transit is that there is no service available. This underscores the perceived lack of transit service in Contra Costa County.

CONTRA COSTA COUNTY INCENTIVES

People who live or work in Contra Costa County are eligible for special incentives from the County, including vanpool subsidies and a Guaranteed Ride Home Program. This year, 20% of the people who live in the county were aware of the commute incentives, an increase from 15% in 1999.

County Profile: Marin

Marin County residents' drive-alone rate to work is slightly more than the regional average (Figure 31). Transit use is close to the regional average (15.5%), but Marin residents use different types of transit. BART is not available in Marin, so buses are the most important part of the commute. Ferries are increasingly popular, with 4% of commuters using ferries, up from 2% in 1994. Marin commuters are

Figure 31

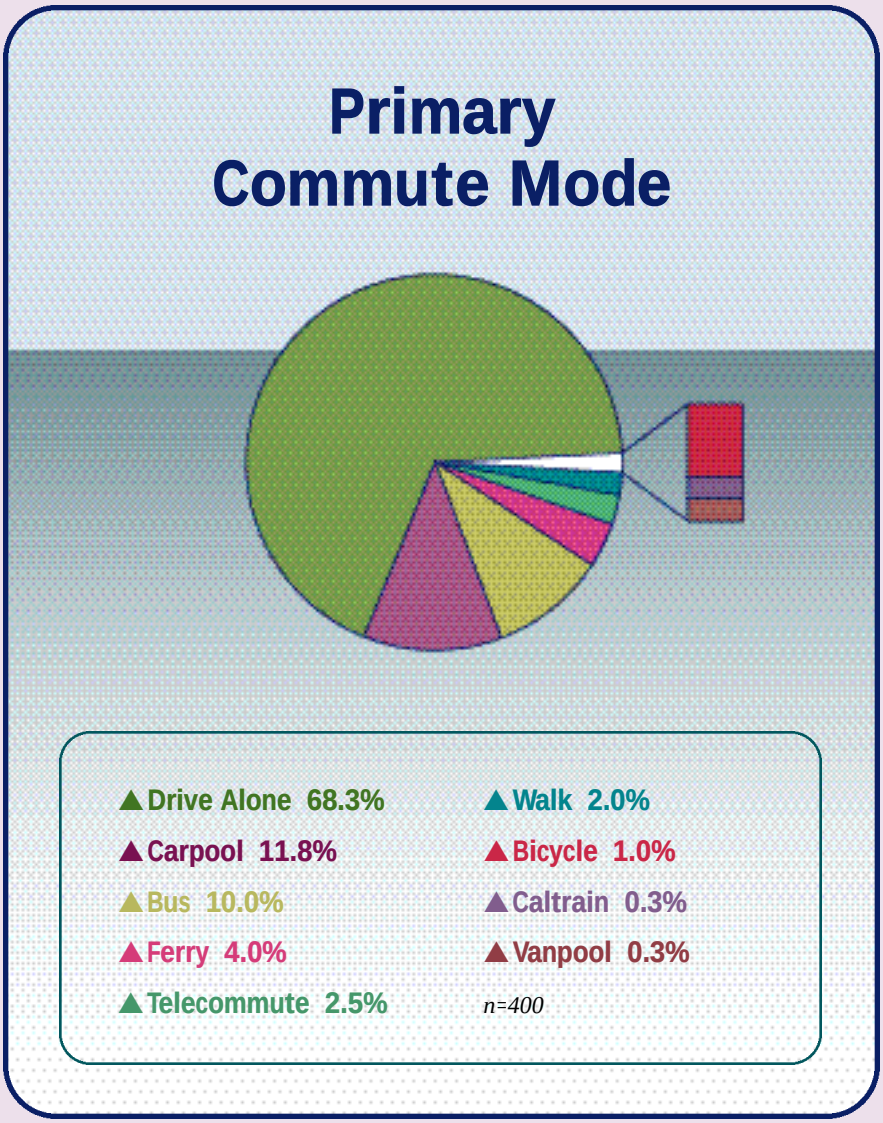


Table 19

Marin Clustered Modes over Time

	1994	1996	1999	2000
Drive Alone	66.5%	61.2%	64.3%	68.3%
Carpool	14.0%	14.7%	14.5%	12.0%
Transit	10.3%	17.4%	15.8%	15.5%
Other	11.3%	6.7%	5.6%	5.5%

also more likely to be telecommuters, with 2.5% choosing this mode, compared to 1.1% regionally.

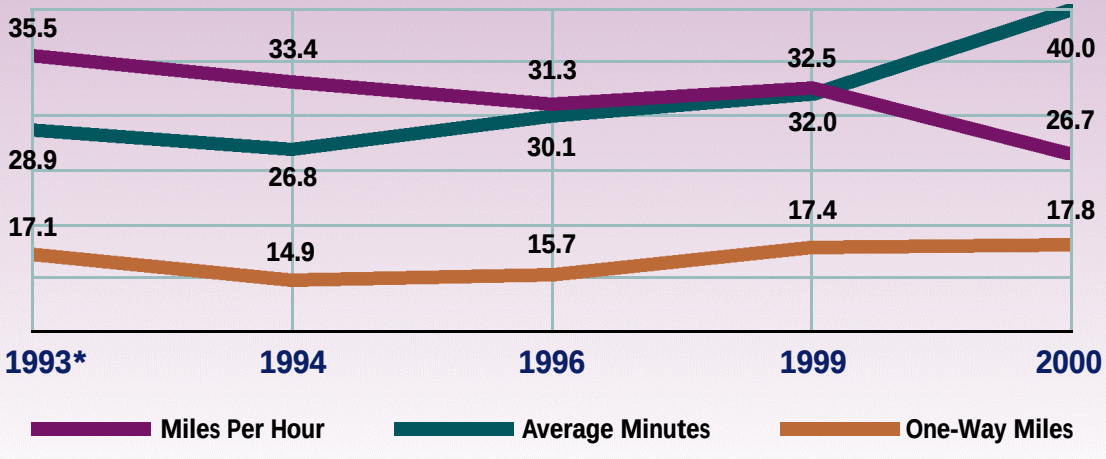
The increase in solo driving appears to be linked to a decline in the carpool/vanpool rate (Table 19). However, the decline is small, so this may be a simple variation resulting from normal sampling error.

Commute Distance and Time

The effects of congestion are evident in the drop in average

Figure 32

Commute Distance and Time



*North Bay counties including Napa,Sonoma and Marin

miles per hour (Figure 32). While the average commute distance only increased by a small amount (0.4 miles), the average time increased by eight minutes. Many Marin commuters have no alternative to Highway 101. It is somewhat surprising that, in the face of increasing congestion, and the availability of carpool lanes on Highway 101, the incidence of carpooling and vanpooling appears to be declining in Marin County.

Changing Commute Conditions

Marin commuters were more likely to experience worsening congestion over the last year than the average commuter in the region (Figure 33). Half the commuters say that the commute has gotten worse over the last year. The top reason is that traffic is heavier, and the second most common reason is construction delays. Conversely, for the relatively small percentage who indicated conditions had improved, "lighter traffic" was their top reason.

Use of Commute Alternatives

In general, Marin County residents are slightly more likely than the average regional com-

Figure 33

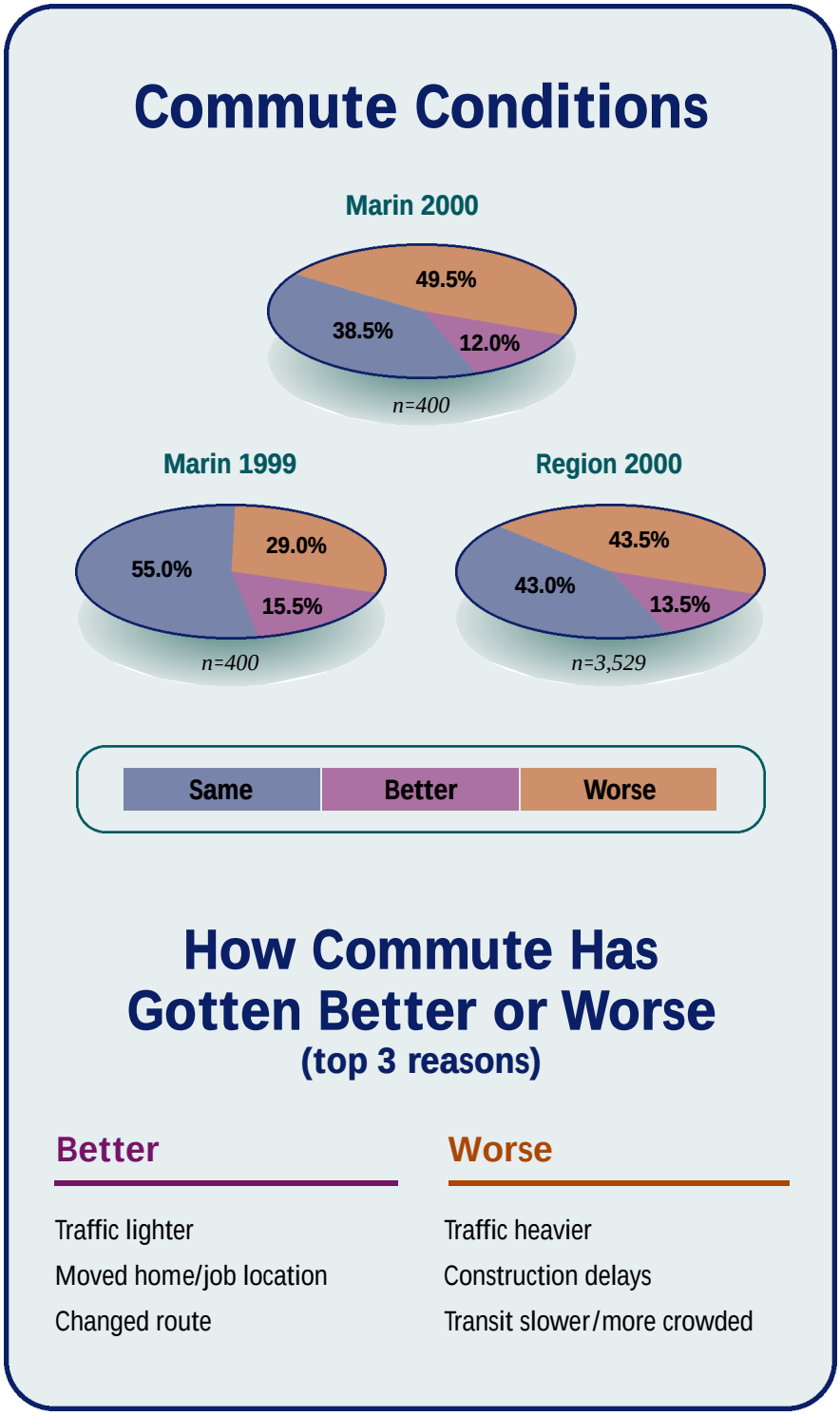
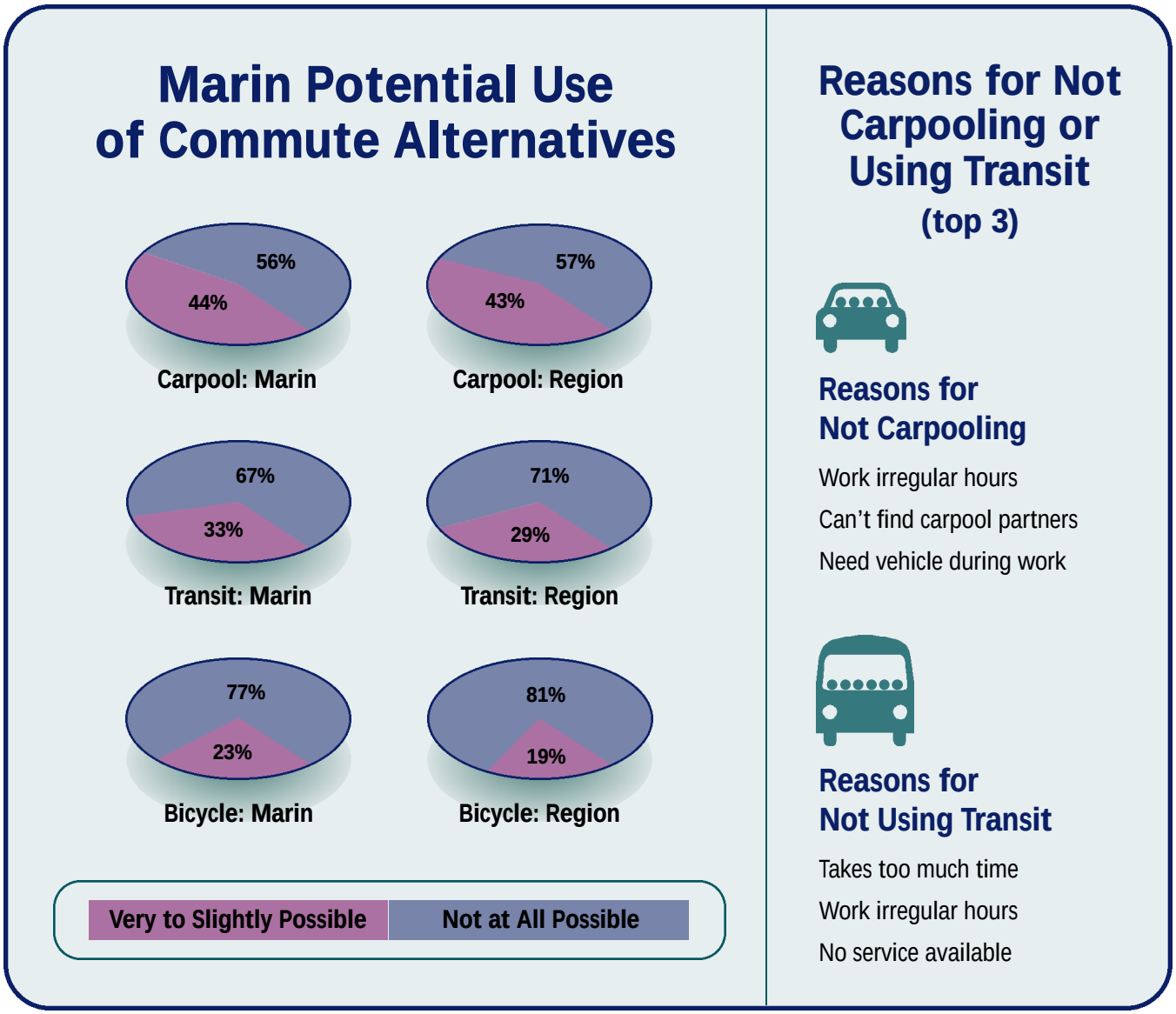


Figure 34



muter to consider using a carpool, riding transit or a bicycle (Figure 34).

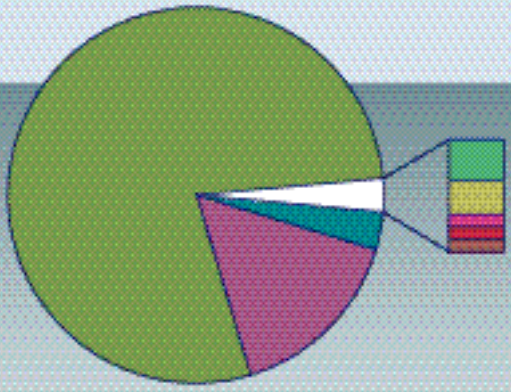
Irregular hours and difficulty finding partners are the main deterrents to carpooling cited by Marin County residents. The added time to make the commute trip by transit was the main reason respondents felt transit didn't work for them. ●

County Profile: Napa

As in past years, Napa County commuters have one of the highest drive-alone rates in the region (Figure 35). This is largely due to the rural nature of the county; the low population density makes it difficult to support transit service. Less than 1% of the commuters ride the bus, and only 0.3% take the ferry. The carpool rate is actually higher

Figure 35

Primary Commute Mode



▲Drive Alone 78.5%
▲Carpool 15.8%
▲Walk 3.3%
▲Telecommute 1.0%
▲Bus 0.8%
▲Ferry 0.3%
▲Bicycle 0.3%
▲Vanpool 0.3%

n=400

Table 20

Napa Clustered Modes over Time

	1994*	1996*	1999	2000
Drive Alone	69.5%	73.0%	73.9%	78.5%
Carpool	18.6%	17.8%	20.1%	16.0%
Transit	5.1%	4.0%	1.0%	1.0%
Other	6.8%	5.3%	4.5%	4.5%

** Napa and Sonoma counties*

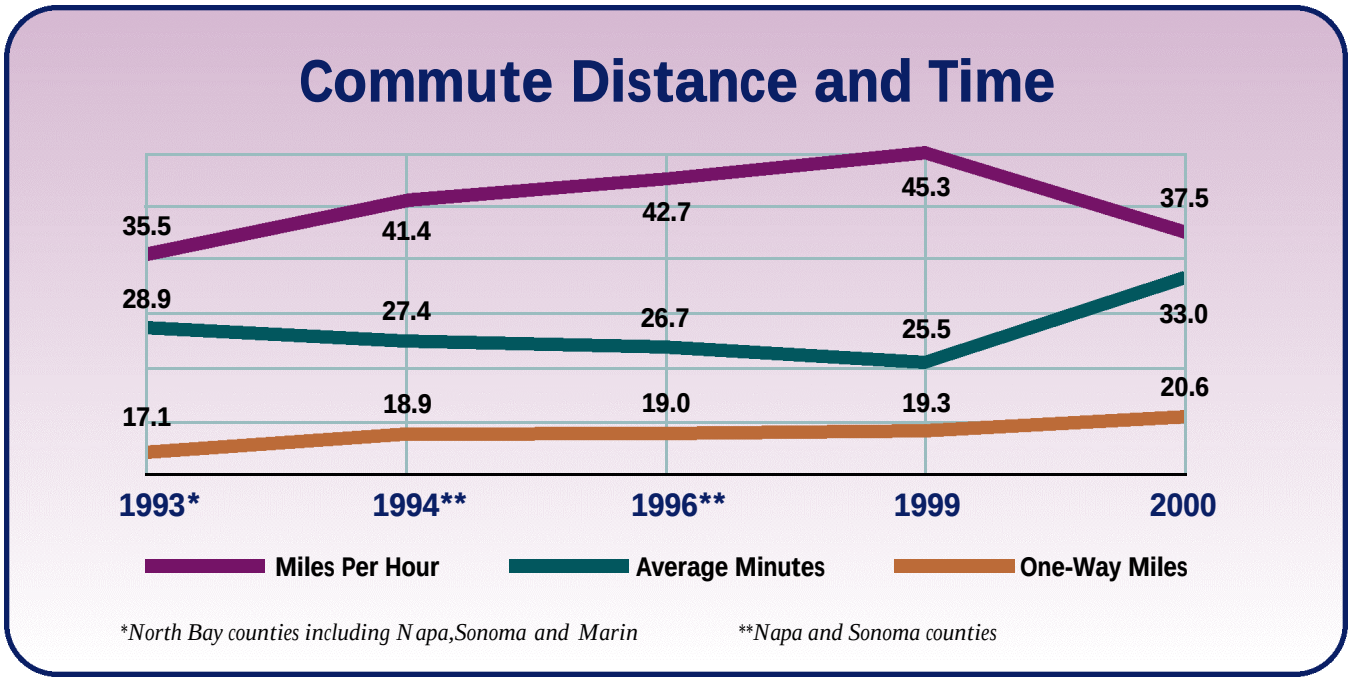
than average, but with almost no one using transit, the drive-alone rate is high.

Unfortunately, the drive-alone rate in Napa County is increasing over time, rising nearly 5% between 1999 and 2000 (Table 20). A corresponding decrease in carpooling and vanpooling was also reported by Napa County respondents in this most recent survey.

Commute Distance and Time

Travel times and distances are increasing in Napa County, as

Figure 36



they are in the rest of the Bay Area (Figure 36). The average commute takes 7.5 minutes more and is 1.3 miles longer than in 1999.

Changing Commute Conditions

Napa County commuters are a bit more apathetic about the commute conditions, as well. Over half feel commute conditions remained the same between 1999 and 2000 (Figure 37). Among those who feel the commute got worse, transit is not a factor as it is in other counties, reflecting the low use of transit in Napa County.

Use of Commute Alternatives

Napa County commuters are most likely to consider carpooling, and equally likely to consider using transit or bicycling (Figure 38). The relative lack of transit in the county is probably why few people are willing to consider it as an alternative. Among all regional commuters, Napa County commuters were most likely to say that they drove alone because they had no other way to get to work.

With the decline in carpooling, it is interesting to see that

Figure 37

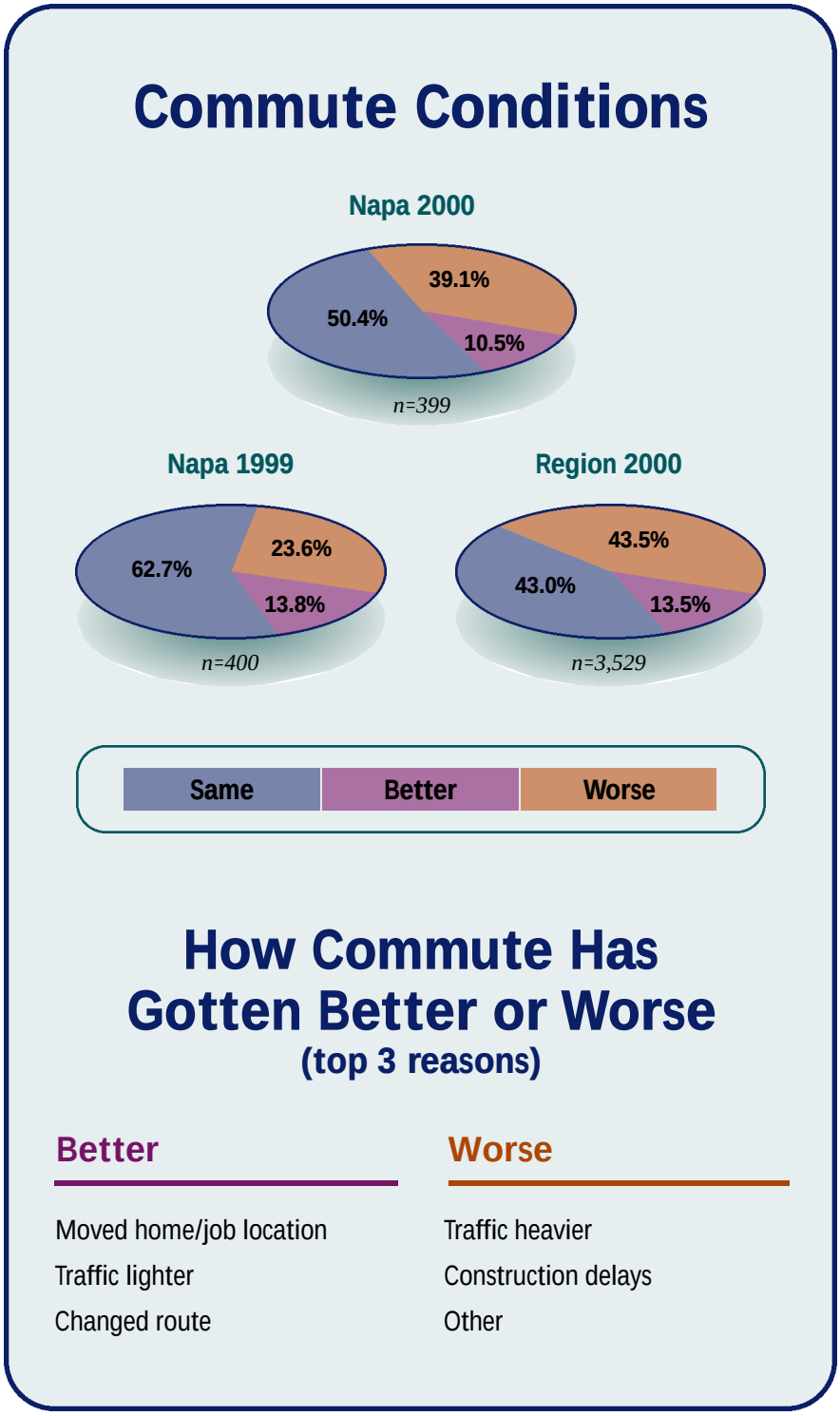
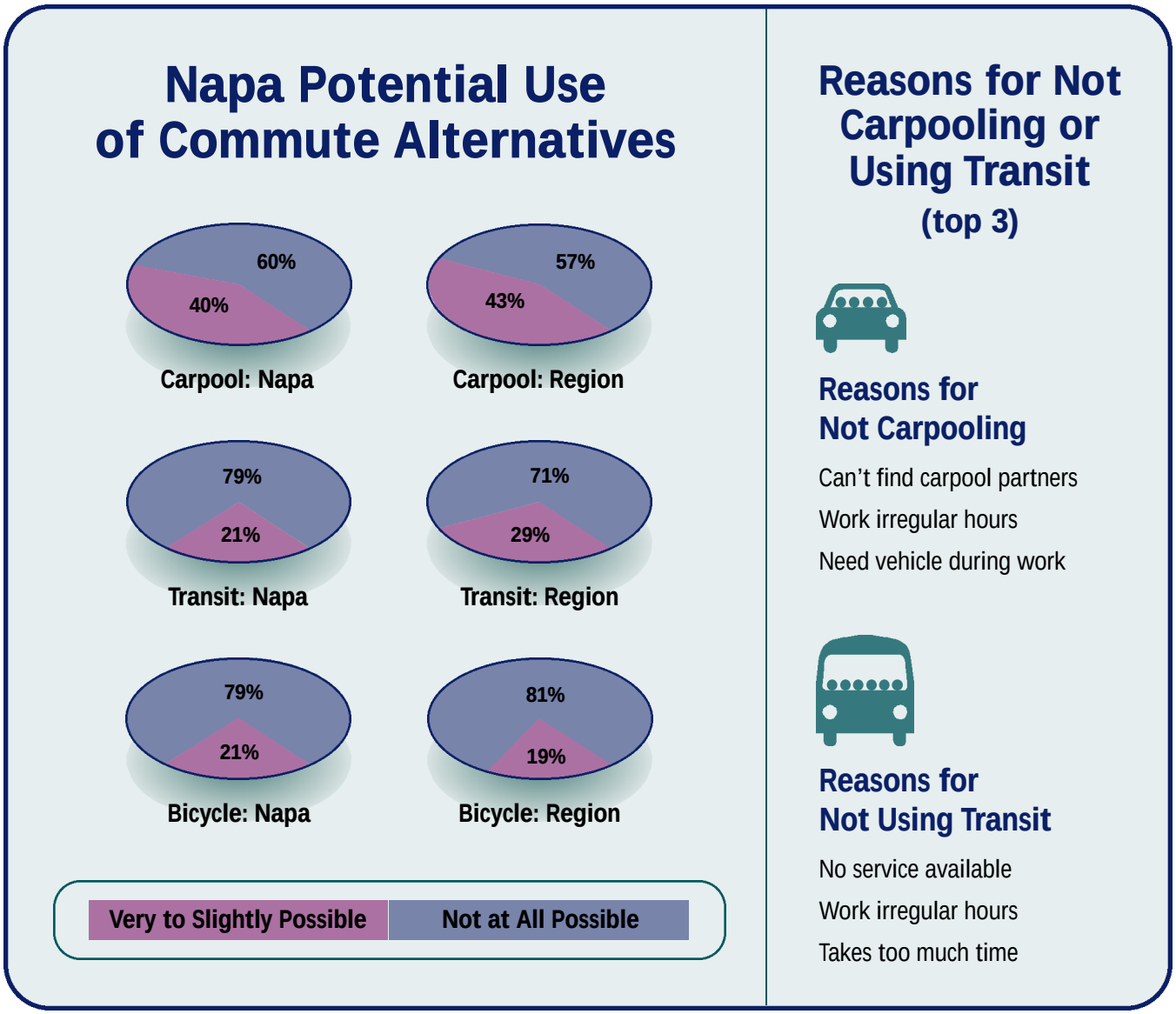


Figure 38



the top reason for not carpooling is that people can't find carpool partners. The increasing commute times and attendant congestion may encourage people to consider this commute alternative. Also, as commutes lengthen, vanpooling begins to be a more viable option.

County Profile: San Francisco

San Francisco residents always have the lowest drive-alone rate in the Bay Area, mainly because so many use transit (Figure 39). In addition, unusually high percentages of commuters walk (8%) and bicycle (2.8%) to work.

The use of transit by San Francisco residents continues to be high (Table 21). The mode split for San Francisco has

Figure 39

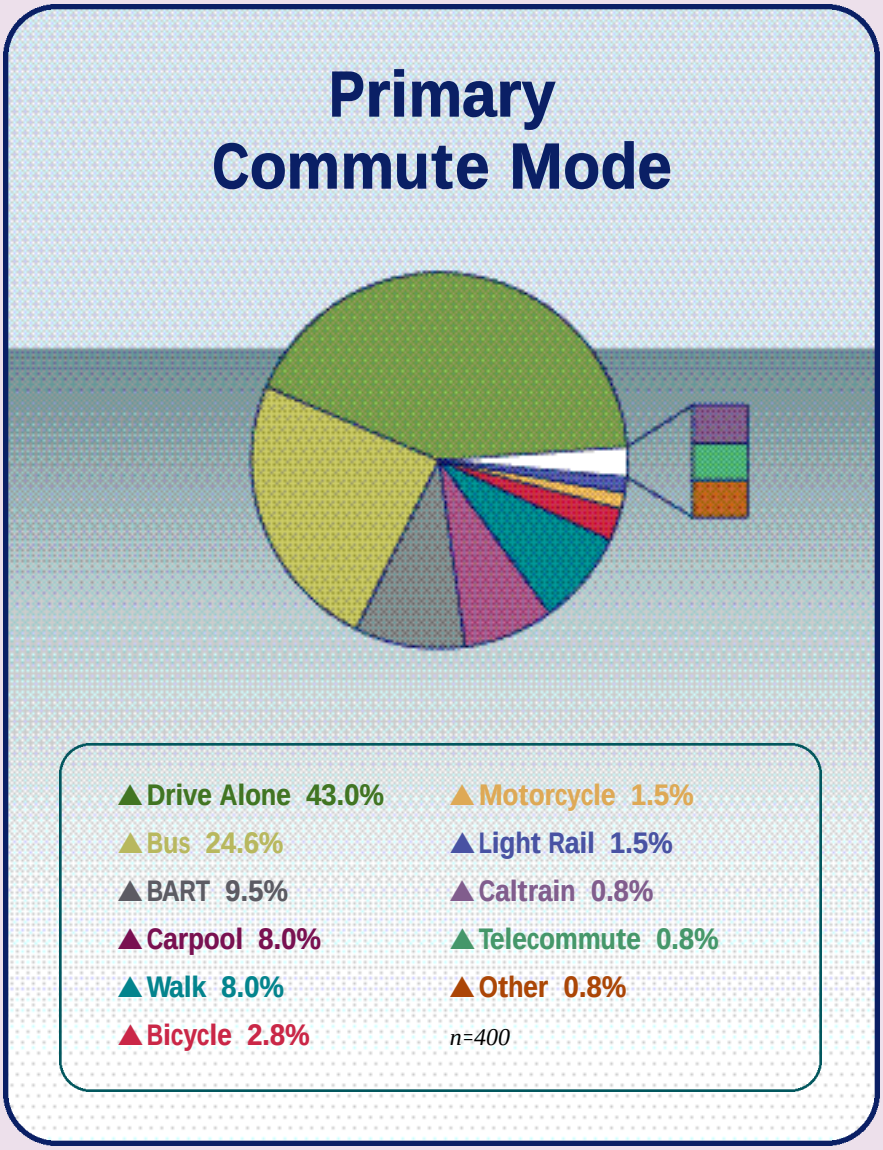


Table 21

San Francisco Clustered Modes over Time

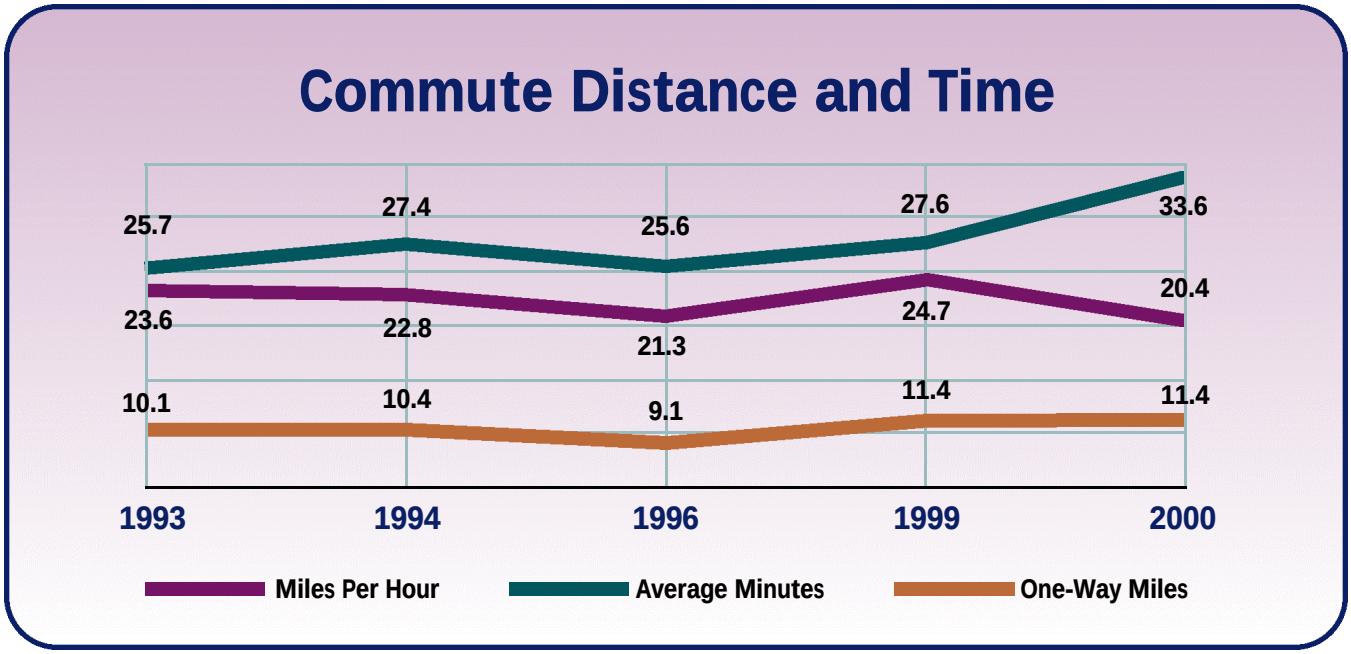
	1993	1994	1996	1999	2000
Drive alone	41.3%	45.5%	37.3%	40.3%	45.2%
Carpool	10.5%	9.1%	9.0%	11.6%	8.0%
Transit	34.6%	35.4%	41.0%	36.8%	36.3%
Other	13.6%	10.3%	12.8%	9.5%	10.5%

fluctuated from year to year and no clear trend is evident. The uniqueness of this county is evident in its mode split. The carpool rate is relatively low compared with other counties, but its well-developed transit infrastructure and the city's density (which allows for higher numbers of walkers and bicyclists) strongly influence how residents get to work.

Commute Distance and Time

The average miles per hour for San Francisco commuters is

Figure 40



quite low, primarily because so many commuters use relatively slow commute modes such as walking and bicycling. The high transit use is also a factor. Average mileage remained the same between 1999 and 2000, but the average time increased by six minutes. Even in the least auto-dependent part of the Bay Area, congestion is a factor.

Changing Commute Conditions

A higher percentage of San Francisco commuters indicated that their commutes had gotten better—17% saying that their commute is better versus 13.5% for the region. However, 33% did indicate it is worse than last year (Figure 41). One factor cited by those who say that it is better is that transit service is improved. Muni received a great deal of publicity for improving its on-time performance and for making other changes, such as adding electronic signs that notify riders when the next bus is expected. While those who said the commute was worse mentioned that transit was more crowded and slower, it seems reasonable to interpret the relative satisfaction with the commute as an indication that Muni has made some improvements.

Figure 41

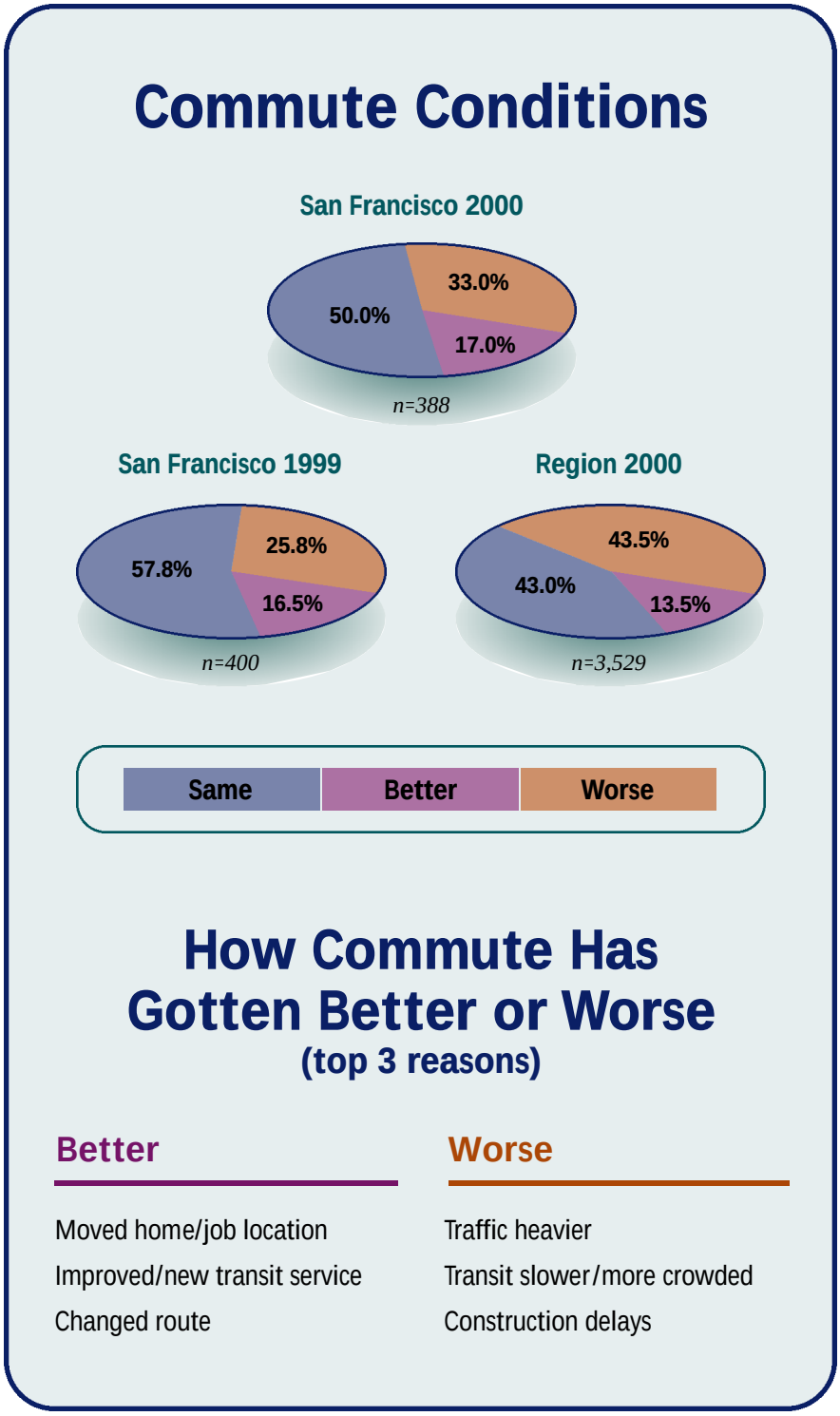
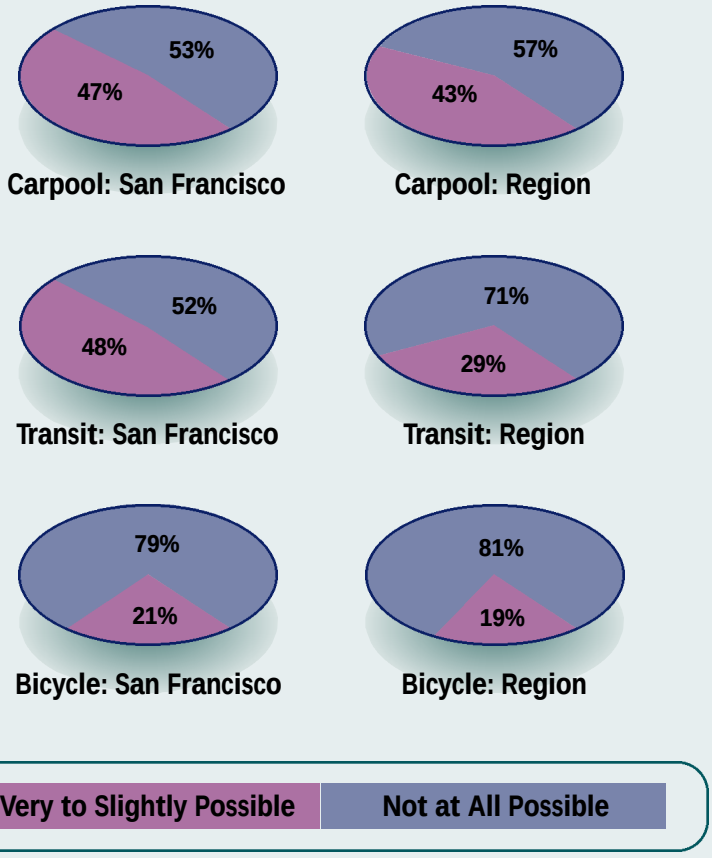


Figure 42

San Francisco Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Takes too much time

Reasons for Not Using Transit

Takes too much time

Work irregular hours

No service available

Use of Commute Alternatives

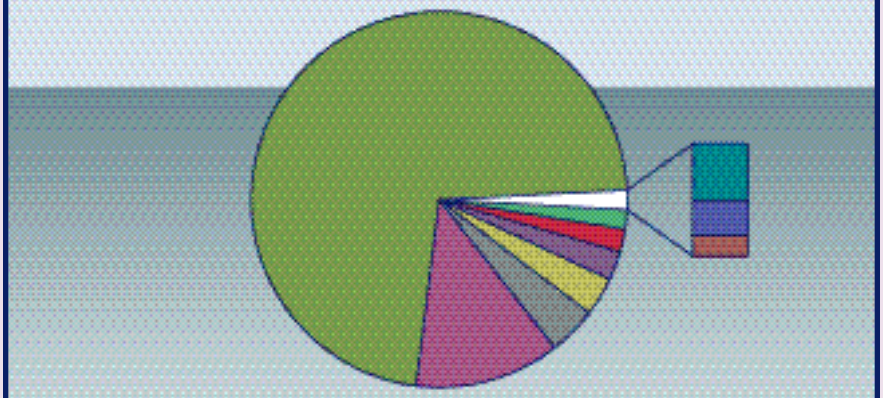
San Francisco residents are most likely to say they would consider using a commute alternative, especially transit (Figure 42). Again, this reflects the fact that San Francisco commuters have good transit alternatives. Of course, not all San Francisco residents work in San Francisco, and work locations outside of the city and county may not be as well served by transit. Concerns are still seen in the results, where the primary reason for not using transit is that it takes too much time.

County Profile: San Mateo

Like San Francisco and Alameda counties, San Mateo County offers several transit alternatives including Caltrain, buses and BART. Caltrain is particularly popular among San Mateo commuters. However, despite all the choices offered to San Mateo commuters, the drive-alone rate is still nearly 5% higher than the regional average (Figure 43). This may in part be due to the rapid growth of Internet-based businesses in the county. These start-ups are notorious for demanding long hours from their employees, a

Figure 43

Primary Commute Mode



- ▲Drive Alone 72.5%
- ▲Carpool 12.5%
- ▲BART 4.0%
- ▲Bus 3.5%
- ▲Caltrain 2.5%
- ▲Bicycle 1.8%
- ▲Telecommute 1.8%
- ▲Walk 0.8%
- ▲Light Rail 0.5%
- ▲Vanpool 0.3%

n=400

Table 22

San Mateo Clustered Modes over Time

	1993	1994	1996	1999	2000
Drive alone	69.5%	71.6%	66.3%	74.9%	72.5%
Carpool	17.3%	17.3%	18.3%	11.9%	12.7%
Transit	7.8%	6.8%	9.3%	8.8%	10.5%
Other	5.4%	3.5%	6.3%	3.7%	4.3%

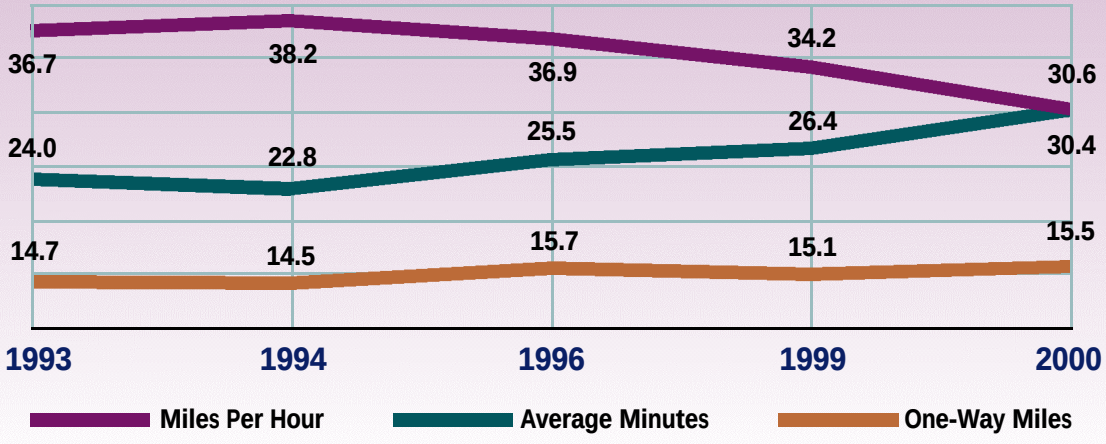
condition which makes it difficult to carpool or use transit. Compared to the rest of the region, San Mateo County solo drivers are particularly likely to say they have no other way to get to work.

After a spike in 1999, the drive-alone rate fell to 72.5% in 2000 (Table 22). Each of the commute alternatives rose slightly—no single alternative mode can be credited for the decrease in the drive-alone rate.

However, the percentage of people who walk fell from 2.4% to 0.8%, while the percentage who bicycle rose from 0.7% to 1.8%.

Figure 44

Commute Distance and Time



Commute Distance and Time

Like the rest of the Bay Area, San Mateo County commutes are taking more time and increasing in length (Figure 44). The average miles per hour dropped from 34.2 to 30.6 between 1999 and 2000 because the increase in distance was less than the increase in time.

Changing Commute Conditions

Because commutes are taking longer in San Mateo County, it is somewhat surprising to see that commuters are happier than the regional average about their commutes, with 15.9% saying that it got better over the last year (Figure 45). General reasons among those who said their commute improved was that the traffic was lighter, and that the roads had been improved. Among those who said their commute was worse, the responses were the opposite: traffic is heavier and there are construction delays. The contradiction of respondents indicating that traffic is lighter and some saying traffic is heavier can only be explained by commuters

Figure 45

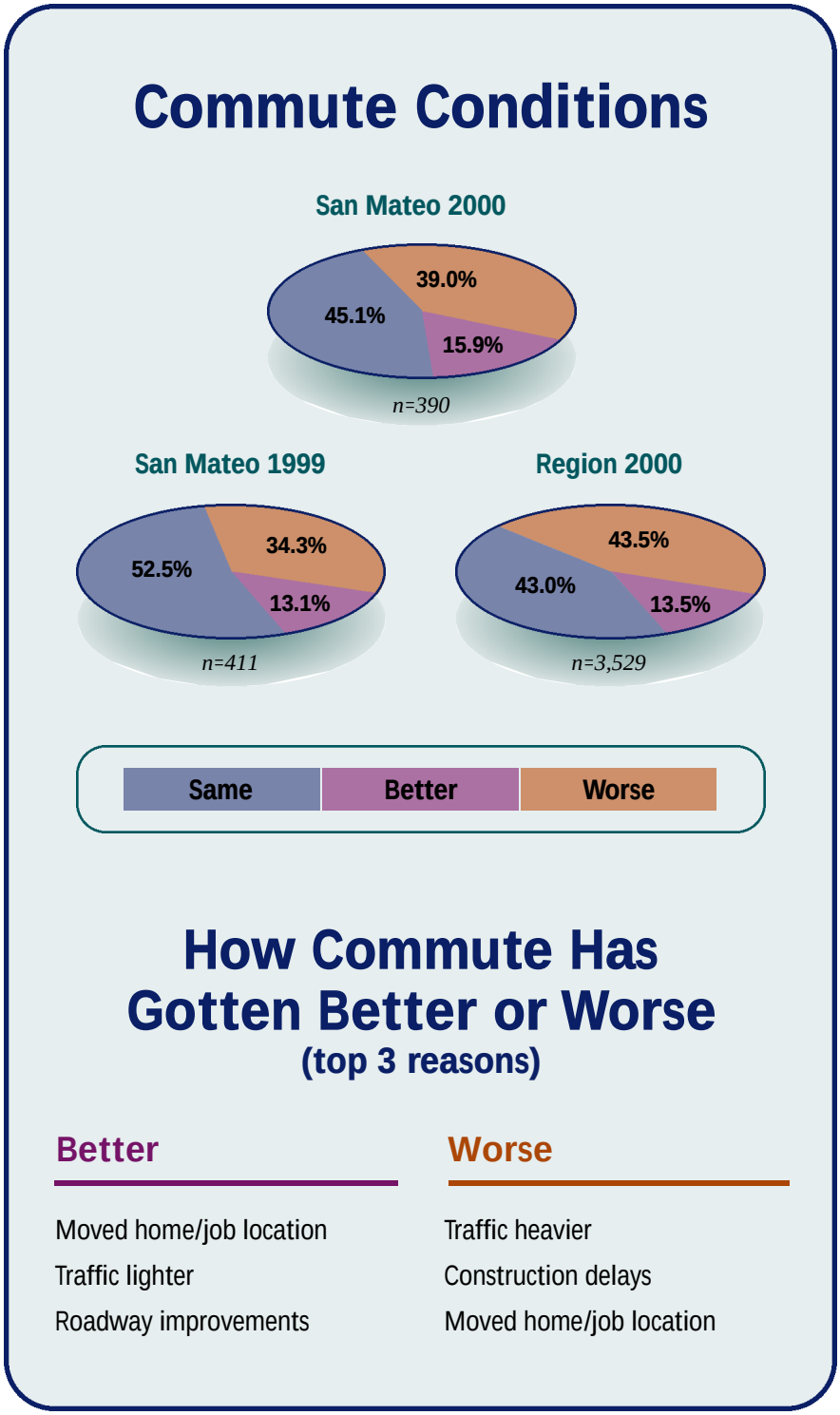
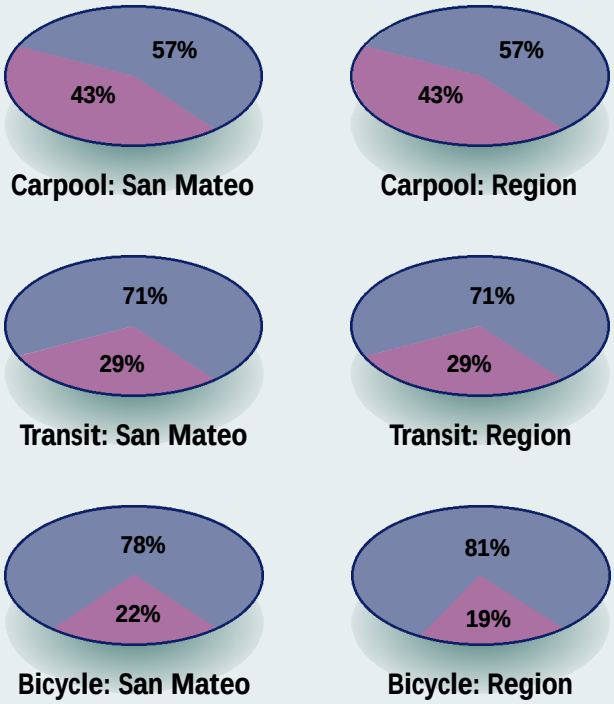


Figure 46

San Mateo Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Need vehicle during work

Reasons for Not Using Transit

No service available

Takes too much time

Work irregular hours

traveling completely different routes.

Use of Commute Alternatives

San Mateo County commuters are slightly more willing to consider bicycling to work, otherwise, their attitudes about alternative commute modes are identical to the regional average (Figure 46). The top reason for not using transit is that no service is available. This could refer to lack of service at odd hours or, more likely, means that buses do not go directly to their home or work location.

County Profile: Santa Clara

Santa Clara County residents have the second-highest drive-alone rate in the region (Figure 47). The key factor in the Santa Clara County mode split is low use of transit. Santa Clara County has many business parks that offer free parking, and relative to counties like San Francisco and Alameda, limited transit service. Caltrain and BART are options mainly for commuters who cross the county line. Because of the

Figure 47

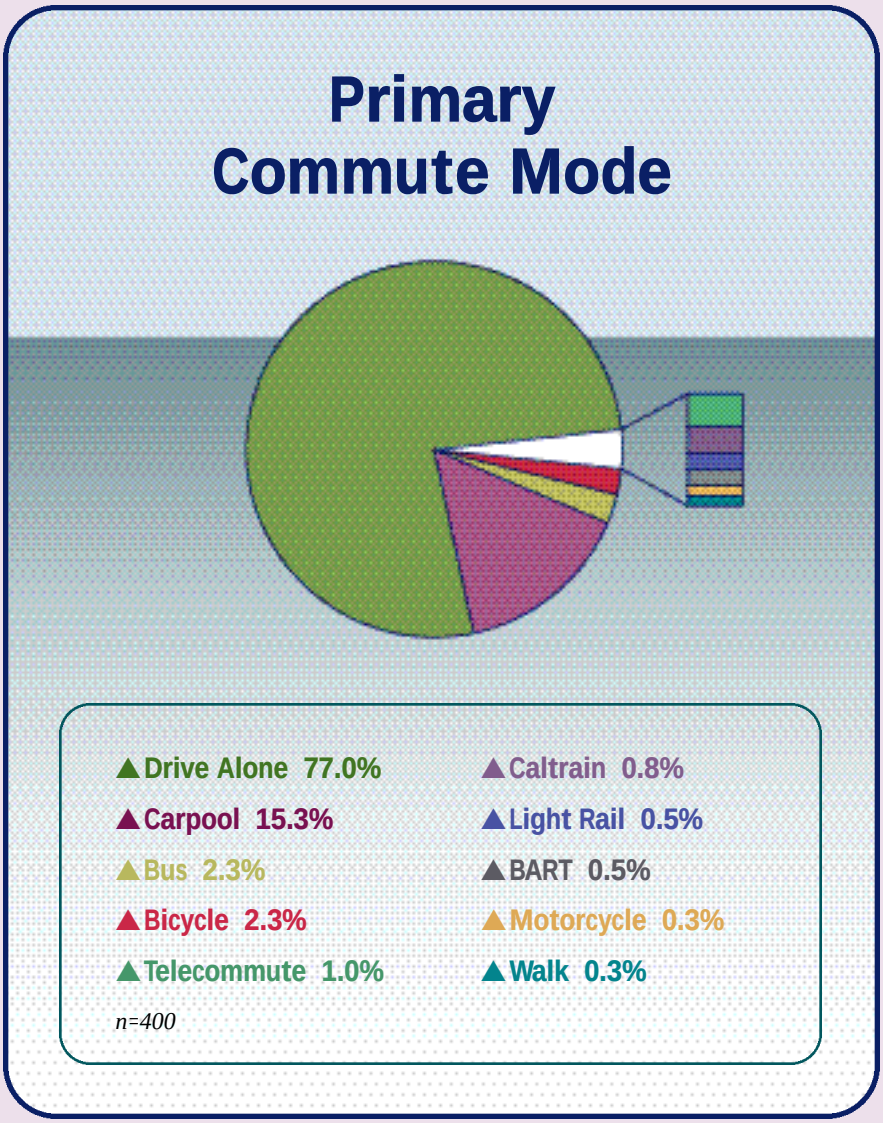


Table 23

Santa Clara Clustered Modes over Time

	1993	1994	1995	1996	1998	1999	2000
Drive Alone	78.0%	71.3%	70.5%	74.3%	77.3%	76.7%	77.2%
Carpool	15.3%	17.3%	21.3%	18.0%	18.3%	15.3%	15.3%
Transit	3.6%	6.8%	4.3%	3.3%	2.9%	5.2%	4.0%
Other	3.4%	4.9%	4.0%	4.5%	0.5%	2.2%	3.5%

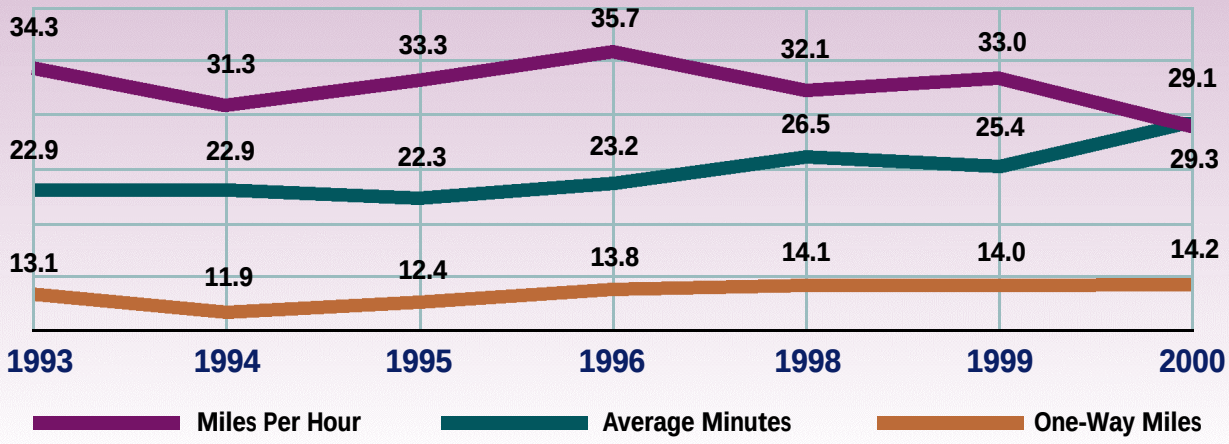
tremendous number of jobs within the county most residents of Santa Clara also work within the county.

As in San Mateo County, many Silicon Valley businesses are Internet start-ups, whose employees are likely to work long, irregular hours, conditions which are not conducive to carpooling or to using transit. However, the percentage of commuters who bicycle to work is higher in Santa Clara County than in the region as a whole.

It is somewhat disheartening to see that the light rail system, inaugurated in the early 1990s, does not seem to have significantly affected the transit mode share. The rate of transit use is

Figure 48

Commute Distance and Time



only negligibly higher in 2000 than it was in 1993. There are, however, significantly more commuters in the county[10] and the sheer increase in numbers may overwhelm real gains produced by the light rail system.

Commute Distance and Time

Commute distances among Santa Clara County residents have increased very slowly, but the average commute time has increased from 22.9 minutes in 1993-1994 to 29.3 minutes in 2000 (Figure 48). The average miles per hour has dropped by five, from 34.3 to 29.1. Like San Francisco, Santa Clara is a major employment center for the region and incoming commuters impact congestion.

Changing Commute Conditions

Santa Clara County commuters, in general, are less happy with commute conditions than commuters in the region as a whole (Figure 49). Despite the relatively short distances they

[10]*ABAG estimates show an increase in employed residents from 809,000 in 1995 to 929,000 in 2000.*

Figure 49

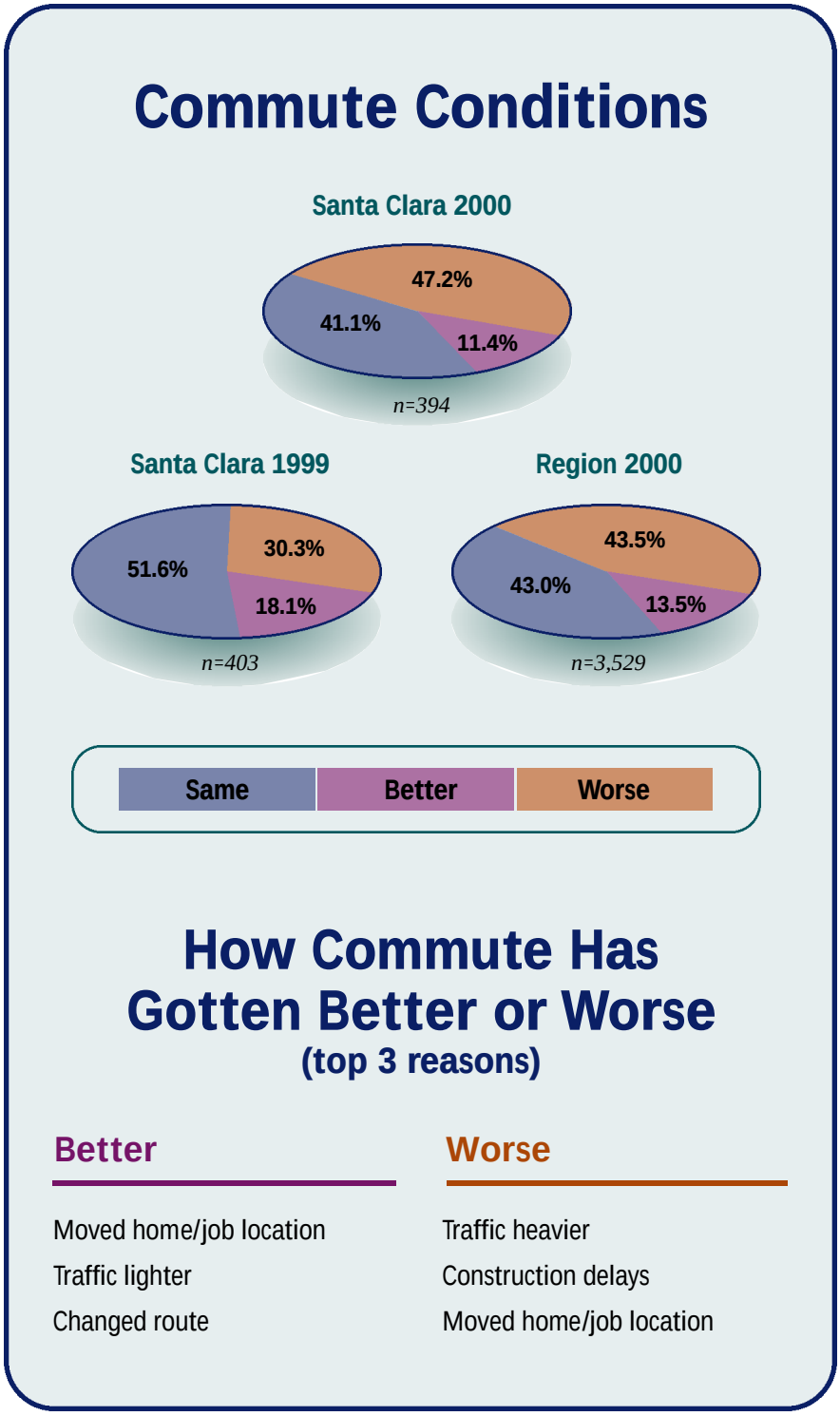
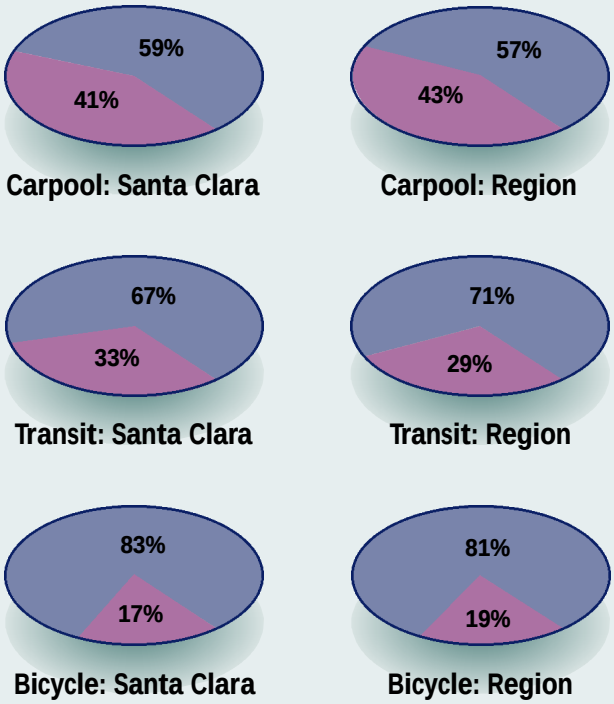


Figure 50

Santa Clara Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Takes too much time

Reasons for Not Using Transit

Takes too much time

No service available

Work irregular hours

travel, they experience congestion and are traveling slowly. Only 11.4% say their commute got better since 1999, and that was likely to be because they moved or changed jobs. Among those who say their commute got worse, the most common reasons are heavier traffic and construction delays.

Use of Commute Alternatives

Commuters in Santa Clara County are slightly more willing to consider transit, but are less likely to consider carpooling or bicycling than the regional average (Figure 50). Irregular hours are a top concern for both those who say they can't carpool as well as those who can't use transit.

County Profile: Solano

Compared to commuters in the rest of the region, Solano County residents are more likely to vanpool and carpool to work (Figure 51). This is due largely to lack of proximity to jobs. Solano County commuters often travel longer distances, making alternative modes more appealing; van-pooling is especially attractive at longer distances.

The drive-alone rate among Solano County commuters fluctuated widely over the past few years, reaching a high of

Figure 51

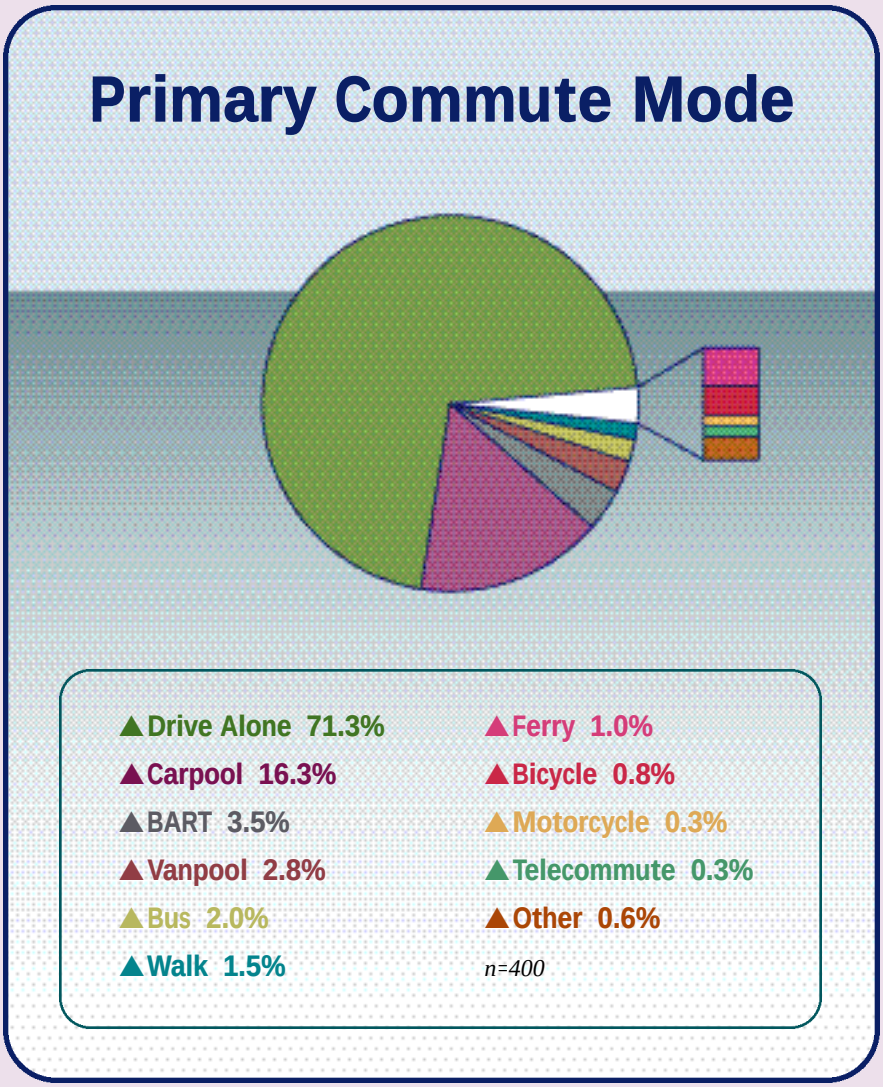


Table 24

Solano Clustered Modes over Time

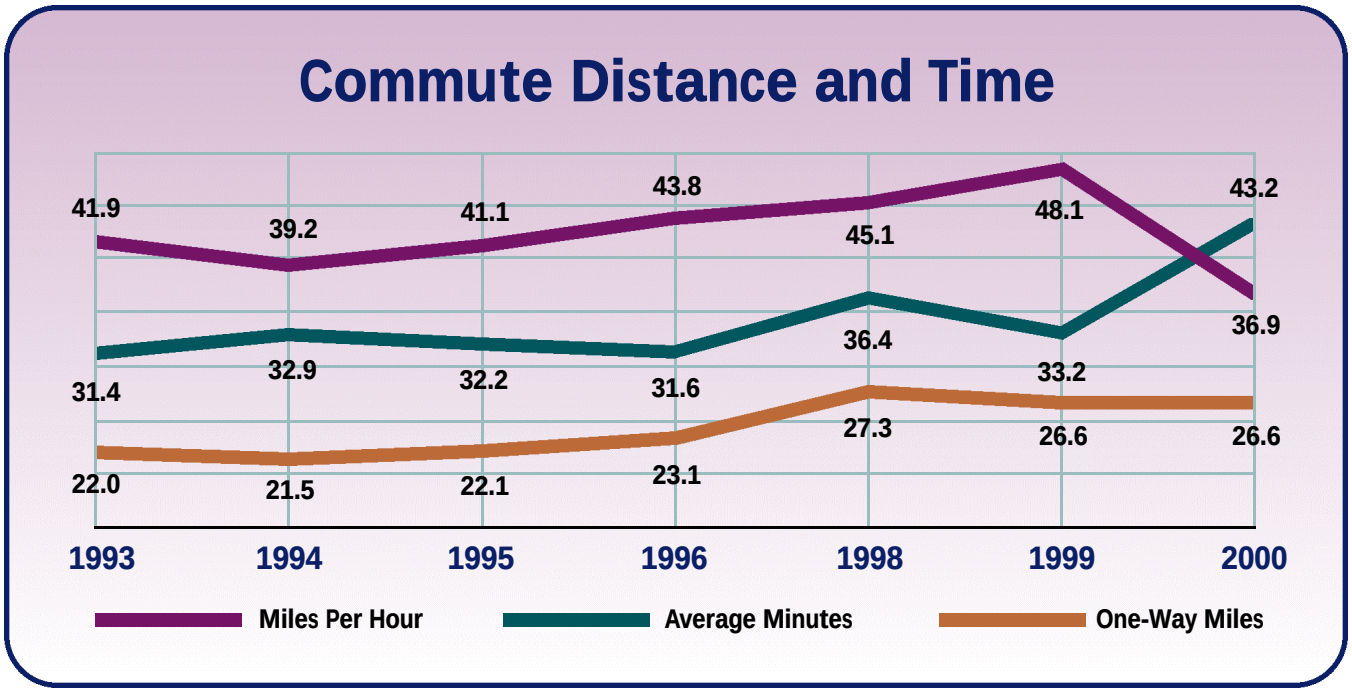
	1993	1994	1995	1996	1998	1999	2000
Drive Alone	68.1%	72.3%	72.8%	66.5%	76.5%	65.8%	71.7%
Carpool	25.4%	22.3%	21.5%	23.0%	18.3%	24.5%	19.0%
Transit	3.9%	2.9%	2.5%	4.5%	3.8%	4.3%	6.8%
Other	2.6%	2.9%	3.3%	6.0%	1.5%	3.5%	2.5%

76.5% in 1998, and a low of 65.8% in 1999 (Table 24). The current rate, 71.7% is about average. In one sense, not showing a large increase in solo driving represents a success for Solano County. As the population has grown, new residents have embraced alternatives rather than driving alone. The carpool rate is down a bit from last year. The transit share, on the other hand, has reached a new high.

Commute Distance and Time

On average, residents of Solano County have the longest

Figure 52



commutes in the Bay Area (Figure 52). At 26.6 miles, the average commute is more than double that of San Francisco residents, who have the shortest average commutes. Between 1999 and 2000, commute times increased by ten minutes, while mileage remained the same, with the net effect of decreasing average miles per hour from 48 to 37. Despite the large decrease, Solano County commuters still have the fastest commute speeds in the region. They are likely to be traveling on freeways, and the high percentage of carpoolers and vanpoolers can take advantage of HOV lanes, which significantly speed commutes.

Changing Commute Conditions

Solano County commuters tend to agree with the rest of the region about commute conditions with about 44% of respondents noting that their commute is worse (Figure 53). Among those who say conditions are better in 2000 than they were in 1999, the top reasons include that traffic is lighter and the roadway has been improved. Those who feel commute conditions are worse say traffic is heavier and there are construction delays.

Figure 53

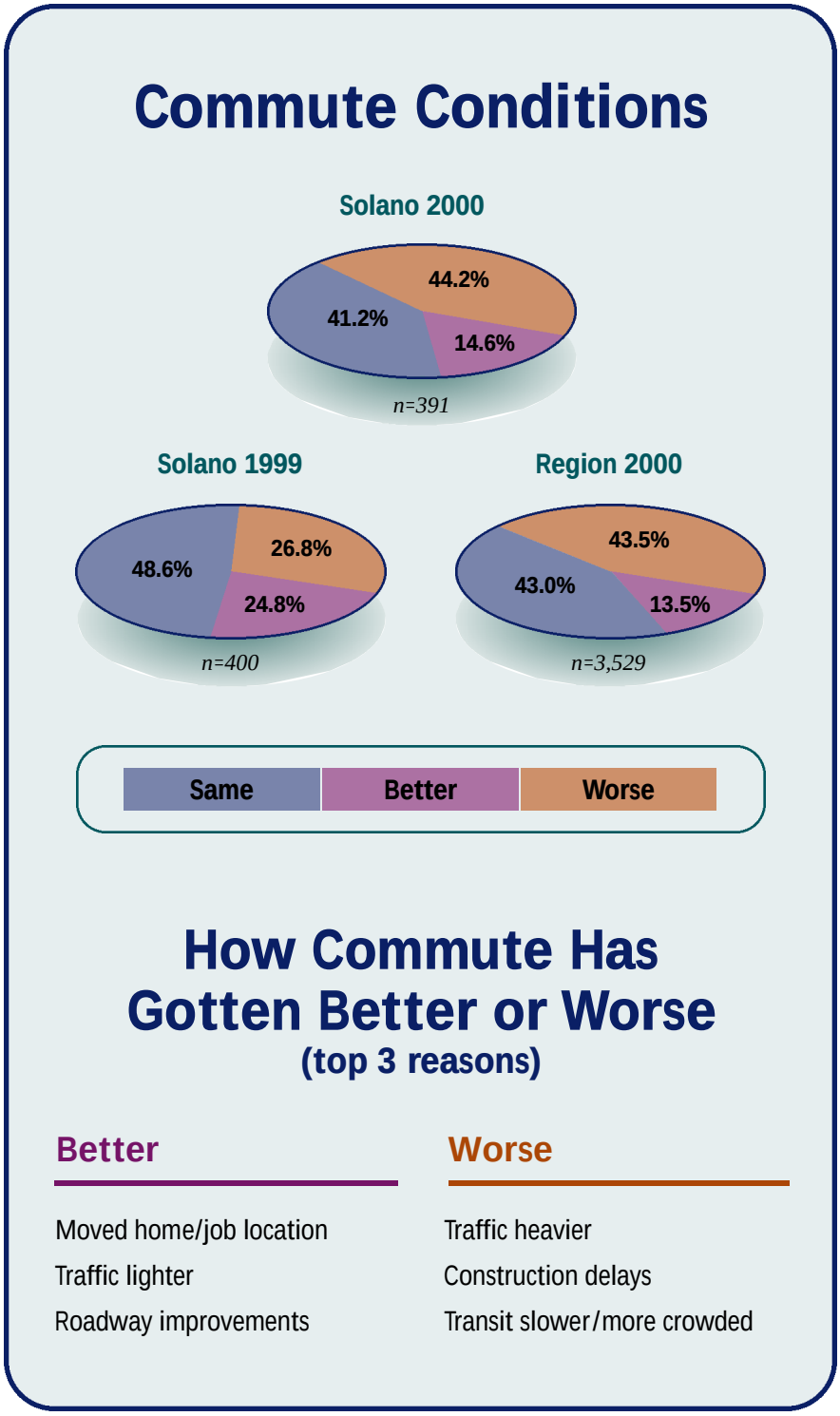
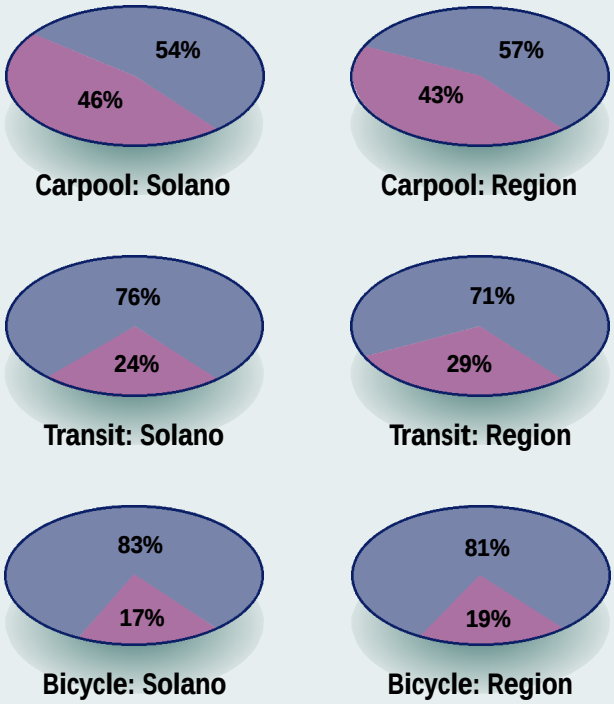


Figure 54

Solano Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Takes too much time

Reasons for Not Using Transit

No service available

Work irregular hours

Takes too much time

Use of Commute Alternatives

While solo drivers in Solano County are more likely to consider carpooling and vanpooling as commute options, they are less likely than regional commuters to consider transit or bicycling (Figure 54). Solano County is a somewhat rural county, so it is not surprising that a top reason for not using transit is that service is not available. Without sufficient population density, it is difficult for cost-effective transit service to succeed.

County Profile: Sonoma

Like the other rural counties in the Bay Area, Sonoma County has a relatively high proportion of solo drivers (Figure 55). Fewer than 3% of commuters use transit. Carpooling is the most popular commute alternative with 15.5% choosing this mode.

The proportion of solo drivers has increased since 1994 (Table 25); simultaneously, the

Figure 55

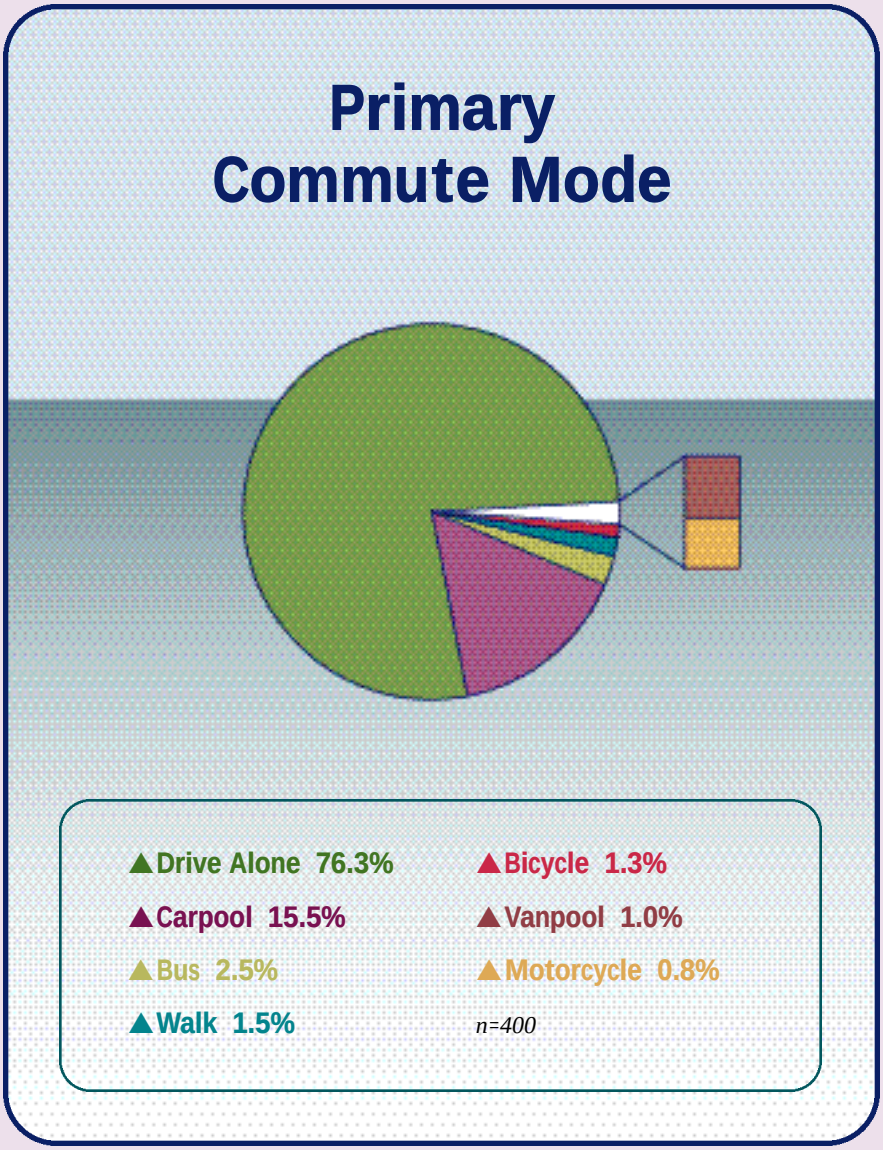


Table 25

Sonoma Clustered Modes over Time

	1994*	1996*	1999	2000
Drive alone	69.5%	73.0%	74.3%	77.0%
Carpool	18.6%	17.8%	16.5%	16.5%
Transit	5.1%	4.0%	4.4%	2.5%
Other	6.8%	5.3%	4.6%	4.0%

** Napa and Sonoma counties*

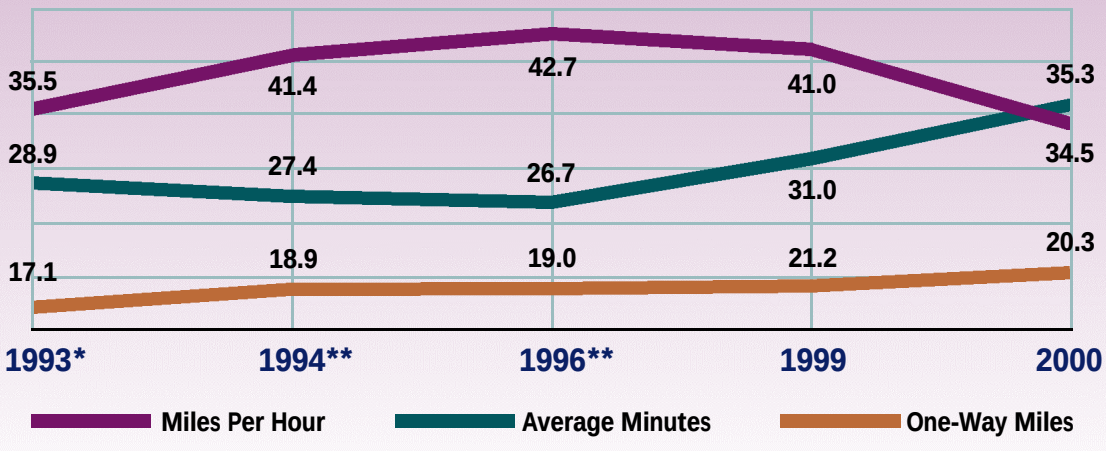
proportion of carpoolers in 2000 was identical to 1999. The changes have been small, however. Commute modes in Sonoma are fairly stable. The decline in transit use is a bit of a curiosity; there is a good chance that it is an anomaly and will return to normal next year.

Commute Distance and Time

Sonoma County is the only county to show a decline in

Figure 56

Commute Distance and Time



**North Bay counties including Napa,Sonoma and Marin* ***Napa and Sonoma counties*

average commute mileage between 1999 and 2000 (Figure 56). Unfortunately, the decline in mileage was accompanied by an increase in commute time. The combination caused the average miles per hour to drop from 41 to 35.

Changing Commute Conditions

Sonoma County residents are slightly less satisfied with commute conditions than the region as a whole (Figure 57). Among those who feel that commute conditions grew worse between 1999 and 2000, the top reason was that traffic was heavier. Given the low use of transit, it is surprising to see that "crowded/slower transit" was the second most commonly cited reason for a worse commute. It is most likely that slow (because of infrequent service) was the operative word.

Use of Commute Alternatives

Compared to the region as a whole, Sonoma County commuters are more likely to consider bicycling, but less likely to consider carpooling or transit as viable commute alternatives to driving alone (Figure 58). Transit is not considered a

Figure 57

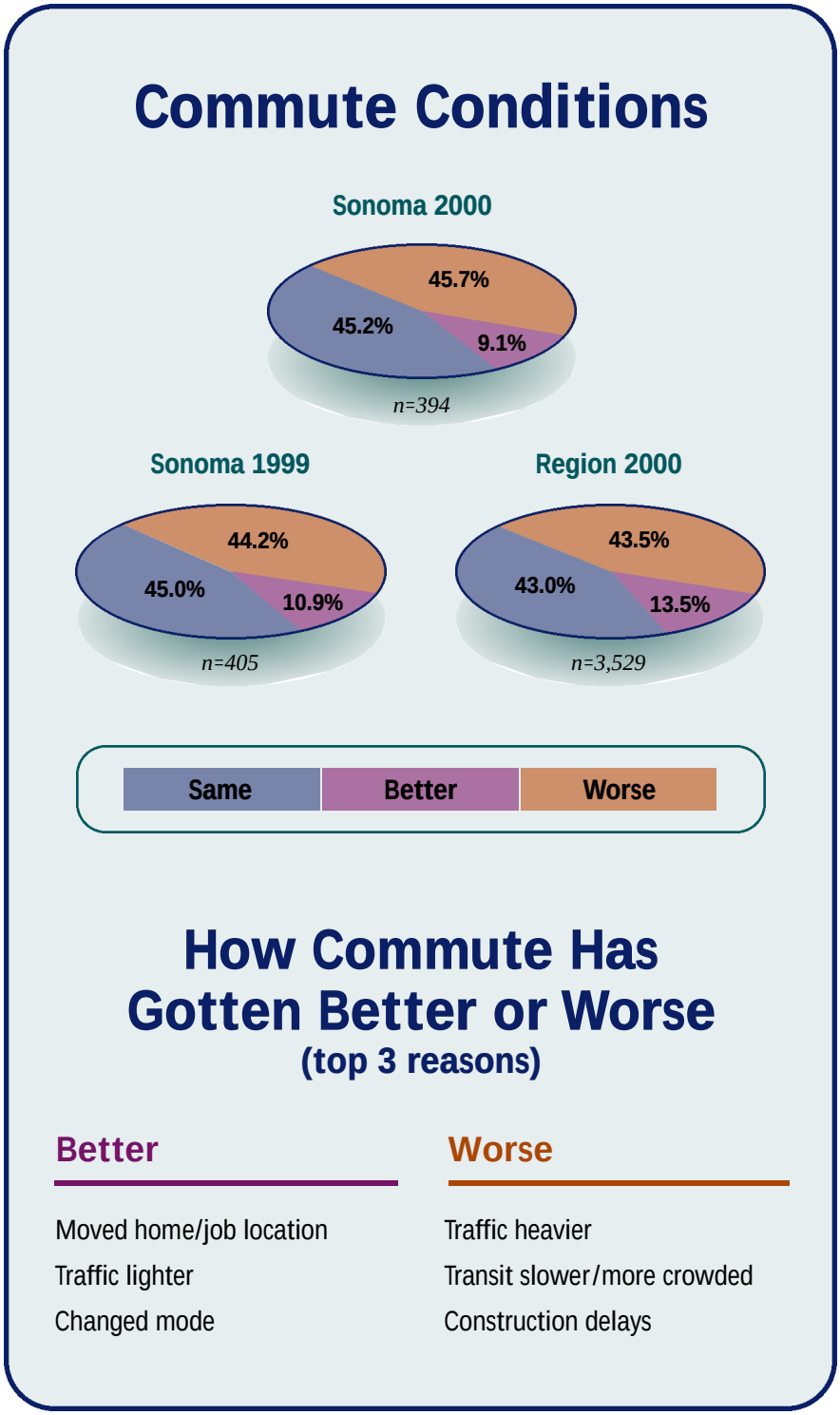
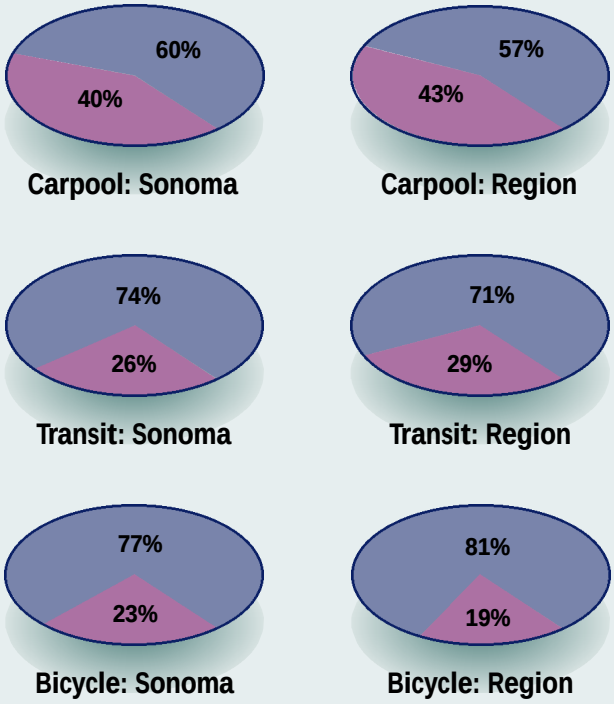


Figure 58

Sonoma Potential Use of Commute Alternatives



Reasons for Not Carpooling or Using Transit (top 3)

Reasons for Not Carpooling

Can't find carpool partners

Work irregular hours

Need vehicle during work

Reasons for Not Using Transit

No service available

Work irregular hours

Takes too much time

viable option primarily because of limited service. As in the other rural counties, the population density may not support cost-effective transit service.

Section Three:

Appendices

Appendix A

Commute Profile 2000 Questionnaire

Hello, my name is _____, with [contractor's name], a public opinion research firm. We're talking to people about their commute experiences so commuting in the Bay Area can be improved.

1. In which county do you live?

1. Alameda	20.5%
2. Contra Costa	12.9%
3. Marin	3.6%
4. Napa	1.8%
5. San Francisco	12.4%
6. San Mateo	11.2%
7. Santa Clara	26.3%
8. Solano	5.0%
9. Sonoma	6.2%
10. Other (skip to end)	

2. Are you 18 years or older and do you work 35 hours or more a week as an employee or independent business person?

1. Yes (skip to 6)	61.2%
2. No (skip to 3)	38.8%
3. None (skip to end)	

3. May I speak with someone who is?
   1. Yes (skip to 6)
   2. No/not available now
   3. None (skip to end)

4. What is the person's name: _____

5. When is a good time to call: _____

6. Do you currently hold more than one job?

1. Yes	12.3%	[IF YES: Please answer the questions in this survey with respect to your primary job and primary work site.]
2. No	87.7%	

7. How many days do you work each week?

1	2	3	4	5	6	7
0.0%	0.0%	2.9%	6.3%	77.9%	9.8%	3.0%

I will now ask you some questions about your commute. All of the following questions pertain to your travel to and from work.

8. How do you usually get to work? [select one]

1.	Drive alone	67.0%
2.	Carpool	13.8%
3.	Vanpool	0.4%
4.	BART	6.6%
5.	Bus	5.0%
6.	Caltrain	0.7%
7.	Altamont Commuter Express	0.5%
8.	Light rail	0.3%
9.	Ferry	0.4%
10.	Bicycle	1.7%
11.	Motorcycle	0.5%
12.	Walk or jog	1.7%
13.	Work at home/telecommute	1.1%
14.	Other	0.2%

9. Would that be _____ [response to Q.7] days a week?

1.	Yes	93%	(Q8 = 1 skip to 14; if Q8 = 2or 3 skip to 12; if Q8 = 4+ skip to 16; if Q8 = 13 and Q9=1 then go to 79)
2.	No	7%	

10. How else do you get to work? [select up to 3 most frequently used]

1.	Drive alone	34.2%	(skip to 13)
2.	Carpool	19.8%	(ask 13)
3.	Vanpool	0.0%	(ask 13)
4.	BART	7.9%	(if Q10 = 4+ skip to 15)
5.	Bus	6.8%	
6.	Caltrain	1.1%	
7.	Altamont Commuter Express	1.8%	
8.	Light rail	1.1%	
9.	Ferry	1.4%	
10.	Bicycle	3.6%	
11.	Motorcycle	1.4%	
12.	Walk or jog	4.0%	
13.	Work at home/telecommute	14.4%	
14.	Other	2.5%	

[›› questions for primary mode = carpool or vanpool (Q8 = 2 or 3) ‹‹]

11. Including yourself and the driver, what is the total number of persons usually in the vehicle?
_____ mean = 2.74

12. With whom do you regularly carpool/vanpool? [read choices; select all that apply]

1.	Household members	36.4%
2.	Non-household relatives	3.7%
3.	Co-workers	42.0%
4.	Friends, acquaintances, neighbors	12.0%
5.	Someone from a Matchlist/RIDES/755-POOL	0.6%
6.	Casual carpool with different people each day	4.0%
7.	Other	0.0%
8.	Refused/don't know	1.2%

[›› questions for primary mode = drive alone (Q8 = 1) ‹‹]

13. When you say you drive alone to work, do you mean that you never have children or other household members with you? [read choices; select all that apply]

1.	I sometimes have children	10.6%
2.	I sometimes have other household members	3.0%
3.	I sometimes have "others"	4.5%
4.	I never have anyone with me	81.3%
5.	Refused/don't know	0.6%

14. How often do you have other people in the vehicle with you? [select one]

1.	Three to five times per week	57.2%
2.	One to two times per week	26.7%
3.	Less than once per week	16.1%

[›› questions for all respondents ‹‹]

15. How long have you been (using the method of transportation you use) to get to work?
_____ years, or _____ months mean = 10.1 years

16. What are your reasons for (using the method of transportation you use?)
[select a maximum of 3]

1.	Commuting costs	8.6%	(skip to 19)
2.	Comfort/relaxation	4.9%	(skip to 19)
3.	Travel time to work	12.6%	(skip to 19)
4	Can use diamond (HOV, carpool) lane	0.8%	(skip to 19)
5.	Privacy	2.5%	(skip to 19)
6.	Having vehicle during work	7.5%	(skip to 19)
7.	Having vehicle before/after work	3.4%	(skip to 19)
8.	Having vehicle to take kids to daycare/school	2.3%	(skip to 19)
9.	Safety	1.0%	(skip to 19)
10.	No other way to get to work	20.2%	(skip to 19)
11.	Work hours/work schedule	11.7%	(skip to 19)
12.	Not being dependent on others	2.5%	(skip to 19)

13.	Want to get home in an emergency	0.4%	(skip to 19)
14.	Like to come and go as I please	1.3%	(skip to 19)
15.	Environment (reduce pollution/save energy)	0.9%	(skip to 19)
16.	Stress	1.0%	(skip to 19)
17.	Incentives offered by employer/other agency	0.2%	(skip to 19)
18.	Enjoy talking to someone/company	0.6%	(skip to 19)
19.	Convenience	11.8%	(ask 17)
20.	Flexibility	2.3%	(ask 17)
21.	Other	2.4%	(skip to 19)
22.	Refused/don't know	1.0%	(skip to 19)

17. What do you mean by *convenience/flexibility*? [select a maximum of 3]

1.	Commuting costs	8.0%
2.	Comfort/relaxation	10.6%
3.	Travel time to work	23.1%
4.	Privacy	4.7%
5.	Having vehicle during work	5.5%
6.	Having vehicle before/after work	5.5%
7.	Having vehicle to take kids to daycare/school	2.2%
8.	Safety	0.1%
9.	No other way to get to work	7.3%
10.	Work hours/work schedule	8.2%
11.	Not being dependent on others	8.0%
12.	Want to get home in an emergency	1.1%
13.	Like to come and go as I please	7.0%
14.	Environment (reduce pollution/save energy)	0.8%
15.	Stress	1.5%
16.	Incentives offered by employer	0.0%
17.	Enjoy talking to someone/company	0.8%
18.	Other	0.4%
19.	Refused/don't know	5.2%

18. Is your commute better, about the same or worse now than it was a year ago? [select one]

1.	Better	13.2%	
2.	Worse	42.5%	(skip to 20)
3.	About the same	42.1%	(skip to 21)
4.	Refused/don't know	2.2%	(skip to 21)

19 . How has it gotten better? [select a maximum of 3]

1.	Traffic lighter	16.2%	(1+ = skip to 21)
2.	Roadway improvements	10.8%	
3.	Changed mode	10.4%	
4.	Moved home/changed job or job location	30.9%	
5.	Changed commute route	12.8%	

6.	Commuting at different time	5.1%
7.	Less road maintenance work	1.7%
8.	Weather improved	0.6%
9.	Improved/new transit service	10.2%
10.	Other	0.8%
11.	Refused/don't know	0.6%

20. How has it gotten worse? [select a maximum of 3]

1.	Traffic heavier	73.8%
2.	Construction delays	8.5%
3.	Changed mode	1.3%
4.	Moved home/changed job or job location	3.6%
5.	Changed commute route	1.5%
6.	Commuting at different time	1.8%
7.	More road maintenance	1.4%
8.	Weather worse	0.3%
9.	Transit more crowded/slower	6.2%
10.	Other	1.6%
11.	Refused/don't know	0.1%

21. About how many miles do you travel to work one-way? _____ mean = 17.2 miles

22. How many minutes does your commute to work take door to door? _____
mean = 34.6 minutes

23. Is there a special diamond lane that can be used only by carpools, vanpools and buses along your route to work?

1.	Yes	40.5%	
2.	No	57.6%	(skip to 29)
3.	Refused/don't know	1.9%	(skip to 29)

24. Do you regularly use the diamond lane to get to work?

1.	Yes	62.9%	
2.	No	35.1%	(skip to 29)
3.	Refused/don't know	2.0%	(skip to 29)

25. Does the diamond lane save you time in getting to work?

1.	Yes	87.9%	
2.	No	11.6%	(skip to 27)
3.	Refused/don't know	0.5%	(skip to 27)

26. How many minutes? _____ mean = 20.7 minutes

27. Did the diamond lane influence your decision to [carpool or vanpool or ride transit]?
    1. Yes 60.0%
    2. No 39.5%
    3. Refused/don't know 0.5%

28. Would you continue to [carpool or vanpool or ride transit] if the diamond lane did not exist?
    1. Yes 21.6%
    2. No 12.1%
    3. Not Sure 66.3%
    4. Refused/don't know 0.0%

29. What is the zip code where you live? _____

    [›› ask 30 only if they do not know their zip code in 30 ‹‹]

30. What city do you live in? _____

31. How long ago did you last change your residence?
    _____ years, or _____ months mean = 7.7 years

32. What is the zip code where you work? _____

    [›› ask 33 only if they do not know their zip code in 33 ‹‹]

33. What city do you work in? _____

34. How long ago did you last change your work location?
    _____ years, or _____ months mean = 5.8 years

35. Is there free all-day parking at or near your worksite?
    1. Yes 75.9%
    2. No 23.4%
    3. Refused/don't know 0.7%

36. How many employees work for your company at your site?
    1. 0 –50 40.2%
    2. 51-100 11.9%
    3. 101-500 21.1%
    4. More than 500 24.5%
    5. Refused/don't know 2.3%

37. Does your employer encourage employees to use transit, carpool, bicycle or walk to work?
    1. Yes 39.3%
    2. No 55.9%
    3. Refused/don't know 4.8%

38. Does your employer offer a subsidy for employees who use transit?

1.	Yes	15.2%
2.	No	20.8%
3.	Refused/don't know	3.3%

39. As part of your employment, do you have the opportunity to work at home instead of going to your regular place of work?

1.	Yes	20.6%	
2.	No	78.2%	(skip to 42)
3.	Refused/don't know	1.1%	(skip to 42)

40. Approximately how many days per month do you work at home instead of at your regular place of work? _____ mean = 5.3

41. Would you say you make more, fewer, or about the same number of trips with your car on days that you work at home? [select one]

1.	More	5.6%
2.	Fewer	63.7%
3.	Same	17.3%
4.	Refused/don't know	13.3%

[›› questions for primary mode = drive alone only ‹‹]

42. Have you ever carpooled, vanpooled or used transit to get to or from your current job?

1.	Yes	33.9%
2.	No	65.6%
3.	Refused/don't know	0.4%

43. Why don't you carpool regularly? [select a maximum of 3]

1.	Takes too much time	8.6%
2.	Desire privacy	3.6%
3.	Need vehicle during work	9.3%
4.	Need vehicle before/after work	4.5%
5.	Transport children	3.8%
6.	Safety	0.8%
7.	Work irregular hours	22.2%
8.	Work overtime	2.0%
9.	Prefer to drive alone	6.9%
10.	Can't find carpool or vanpool partners	29.6%
11.	Never considered carpooling	4.5%
12.	Other	3.4%
13.	Refused/don't know	0.7%

44. Why don't you take transit regularly? [select a maximum of 3]

1.	Takes too much time	19.7%
2.	Desire privacy	2.3%
3.	Need vehicle during work	9.5%
4.	Need vehicle before/after work	4.1%
5.	Transport children	4.0%
6.	Safety	1.1%
7.	Work irregular hours	14.6%
8.	Work overtime	1.9%
9.	Transit unreliable	5.9%
10.	Prefer to drive alone	9.6%
11.	Cost/too expensive	1.9%
12.	No service available on my commute	17.9%
13.	Never considered using transit	4.6%
14.	Other	2.4%
15.	Refused/don't know	0.5%

45. If there was a lot to park your car and meet a bus or carpool, would you be...
[read choices; select one]

1.	More likely to use a bus or carpool	21.5%
2.	No more likely to use a bus or carpool	49.9%
3.	Refused/don't know	3.0%

46. How possible would it be for you to carpool at least one or two days a week? Would it be...
[read choices; select one]

1.	Very possible	13.2%
2.	Somewhat possible	12.6%
3.	Slightly possible	16.7%
4.	Not at all possible	56.8%
5.	Refused/don't know	0.7%

47. How possible would it be for you to use transit at least one or two days a week? Would it be...
[read choices; select one]

1.	Very possible	10.2%
2.	Somewhat possible	7.3%
3.	Slightly possible	11.2%
4.	Not at all possible	70.5%
5.	Refused/don't know	0.9%

48. How possible would it be for you to bicycle all or part of the way to work at least one or two days a week? Would it be... [read choices; select one]

1.	Very possible	7.6%
2.	Somewhat possible	5.2%
3.	Slightly possible	5.8%

4. Not at all possible 81.0%
5. Refused/don't know 0.4%

49. Would you be willing to take a carpool passenger on a full or part-time basis if it increased your travel time by less than 5 minutes?
    1. Yes 47.4%
    2. No 50.3%
    3. Refused/don't know 2.3%

[›› questions for all respondents ‹‹]

50. Are you aware of a free service that gives you a list of people with similar commutes for you to carpool with?
    1. Yes 35.8%
    2. No 63.7%
    3. Refused/don't know 0.4%

51. Have you ever heard of a toll-free rideshare number such as (800) 755-POOL?
    1. Yes 54.5%
    2. No 45.2% (skip to 55)
    3. Refused/don't know 0.3% (skip to 55)

52. Have you ever contacted (800) 755-POOL?
    1. Yes 8.0%
    2. No 91.6%
    3. Refused/don't know 0.4%

53. Have you ever heard of a toll-free rideshare number such as (800) 53-KMUTE?
    1. Yes 46.4%
    2. No 53.5% (skip to 57)
    3. Refused/don't know 0.1% (skip to 57)

54. Have you ever contacted (800) 53-KMUTE?
    1. Yes 12.9%
    2. No 86.8%
    3. Refused/don't know 0.3%

[›› Qs 55 and 56 for Contra Costa County respondents only ‹‹]

55. Have you heard of commute incentives available for people who either work or live in Contra Costa County?
    1. Yes 19.5%
    2. No 80.5% (skip to 58)
    3. Refused/don't know 0.0% (skip to 58)

56. Can you name any of the available incentives? [select all that apply]

1.	No/don't know	56.6%
2.	Vanpool	8.4%
3.	Transit tickets	15.7%
4.	Carpool (script)	10.8%
5.	Guaranteed Ride Home	7.2%
6.	Refused/don't know	1.2%

[›› Q57 for Alameda, Contra Costa and Santa Clara County respondents only ‹‹]

57. Are you aware of a program that provides a Guaranteed Ride Home from work for individuals who carpool or use transit to get to work?

1.	Yes	12.3%
2.	No	87.3%
3.	Refused/don't know	0.4%

[›› questions for all respondents ‹‹]

58. Are you aware that you can get a tax break for using public transit? [select all that apply]

1.	Yes	15.7%
2.	No	84.1%
3.	Refused/don't know	0.2%

59. Are you aware of a program called Commuter Check? [select all that apply]

1.	Yes	18.5%
2.	No	81.4%
3.	Refused/don't know	0.1%

60. Have you ever heard of the phone number 817-1717?

1.	Yes	8.4%	
2.	No	91.5%	(skip to 62)
3.	Refused/don't know	0.1%	(skip to 62)

61. Can you describe what types of information are available by calling 817-1717?

1.	No	46.5%
2.	Traffic information	18.1%
3.	Transit information	19.0%
4.	Carpool/vanpool information	12.4%
5.	Highway construction information	1.5%
6.	Airport ground transportation information	0.3%
7.	Bicycle program information	0.6%
8.	Other	0.0%
9.	Refused	1.5%

62. Have you ever heard of an organization called RIDES for Bay Area Commuters [›› not asked of Solano and Napa county respondents ‹‹]?

1.	Yes	27.2%	
2.	No	72.7%	(skip to 66)
3.	Refused/don't know	0.1%	(skip to 66)

63. How did you hear of RIDES for Bay Area Commuters? [select a maximum of 3]

1.	Employer event	10.9%
2.	Community event	1.9%
3.	Friend/co-worker	8.4%
4.	Freeway sign	15.3%
5.	Direct mail	2.0%
6.	Employer survey	1.3%
7.	Saw vanpool	4.2%
8.	Transit agency	2.2%
9.	Local city/agency	1.9%
10.	School	0.6%
11.	Media	42.0%
12.	Other	0.8%
13.	Refused/don't know	8.5%

64. Have you ever heard of an organization called Solano Commuter Information [›› asked of Solano and Napa county respondents ‹‹]?

1.	Yes	23.1%	
2.	No	76.9%	(skip to 66)
3.	Refused/don't know	0.0%	(skip to 66)

65. How did you hear of Solano Commuter Information? [select a maximum of 3]

1.	Employer event	9.4%
2.	Community event	4.2%
3.	Friend/co-worker	17.8%
4.	Freeway sign	14.1%
5.	Direct mail	3.7%
6.	Employer survey	0.0%
7.	Saw vanpool	2.1%
8.	Transit agency	2.6%
9.	Local city/agency	1.6%
10.	School	1.6%
11.	Media	30.9%
12.	Other	4.7%
13.	Refused/don't know	7.3%

66. What would be the most convenient way for you to access information about transit schedules or traffic conditions?

1. Web site	40.6%
2. E-mail updates	5.1%
3. Telephone information	10.3%
4. Pager	0.3%
5. Radio updates	25.0%
6. Television updates	9.7%
7. Brochures or other written material	5.0%
8. Other	0.3%
9. Refused/don't know	3.6%

67. Do you have regular access to the Internet?

1.	Yes	83.3%	
2.	No	16.6%	(skip to 70)
3.	Refused/don't know	0.1%	(skip to 70)

68. Are you aware of transit, carpool or traffic information available via the Internet?

1.	Yes	45.0%	
2.	No	55.0%	(skip to 70)
3.	Refused/don't know	0.0%	(skip to 70)

69. How often do you access this information? Is it… [read choices; select one]

1.	Three or more times per week	10.5%
2.	One to two times per week	8.5%
3.	Less than once per week	19.0%
4.	Never/rarely	61.5%
5.	Refused/don't know	0.5%

70. Do you always, sometimes or never have a vehicle available for getting to work?

1.	Always available	89.0%
2	Sometimes available	6.3%
3.	Never available	4.4%
4.	Refused/don't know	0.3%

71. How old are you? Are you…

1.	Less than 20	2.3%
2.	20 to 29	17.3%
3.	30 to 39	28.8%
4.	40 to 49	26.1%
5.	50 to 59	19.6%
6.	60 or older	5.1%
7.	Refused	0.8%

72. And what is your combined annual (before-tax) household income? Is it…

1.	Under $20,000	4.3%
2.	$21,000 to $35,000	10.2%
3.	$36,000 to $50,000	14.6%
4.	$51,000 to $65,000	12.4%
5.	$66,000 to $80,000	11.6%
6.	$81,000 to $100,000	11.0%
7.	More than $100,000	21.8%
8.	Refused/don't know	14.2%

73. Gender of respondent: [Do not need to ask]

1.	Male	51.6%
2.	Female	48.4%

74. For verification purposes, can I please get your first and last name?

75. Is this a home-based business without any other regular work location outside your home?

1.	Yes	0.0%
2.	No	100.0%

Those are all the questions I have for you. Thank you very much for participating.

Appendix B

Demographic Variables and Mode

This appendix compares information on age, household income, and gender with commute mode. Table 29 provides information on vehicle availability on a county by county basis.

Respondents above the age of 50 are more likely to drive alone (Table 26). Respondents below the age of 30 are more likely to use transit. "Other" mode use is highest for the 20- to 29-year-old group. The effect of household income on mode choice is most notable for those with an income below $20,000 (Table 27). The drive-alone rate for this group is sig-

Table 26

Age and Commute Mode

	Drive Alone	Carpool	Transit	Other	Total
Younger than 20 *(2.3% of respondents)*	65.9%	11.0%	20.7%	2.4%	100%
20 to 29 *(17.4% of respondents)*	63.5%	10.9%	18.1%	7.5%	100%
30 to 39 *(29.0% of respondents)*	64.0%	18.0%	13.8%	4.2%	100%
40 to 49 *(26.4% of respondents)*	66.9%	18.6%	11.6%	3.0%	100%
50 to 59 *(19.8% of respondents)*	74.8%	9.1%	11.2%	5.0%	100%
60 or older *(5.1% of respondents)*	78.7%	4.9%	12.6%	3.8%	100%
Regional Average *n=3,578*	**67.6%**	**14.2%**	**14.0%**	**4.5%**	**100%**

Table 27

Household Income and Commute Mode

	Drive Alone	Carpool	Transit	Other	Total
Less than $20,000 *(5.0% of respondents)*	53.8%	12.2%	25.0%	9.0%	100%
$21,000 to $35,000 *(11.9% of respondents)*	64.0%	14.9%	14.1%	7.0%	100%
$36,000 to $50,000 *(17.0% of respondents)*	68.6%	9.9%	17.5%	4.0%	100%
$51,000 to $65,000 *(14.5% of respondents)*	69.0%	12.7%	13.6%	4.7%	100%
$66,000 to $80,000 *(13.5% of respondents)*	70.1%	13.2%	12.2%	4.5%	100%
$81,000 to $100,000 *(12.8% of respondents)*	64.9%	20.5%	10.9%	3.8%	100%
More than $100,000 *(25.3% of respondents)*	67.1%	18.0%	11.7%	3.2%	100%
Regional Average *n=3,097*	**67.6%**	**14.2%**	**13.6%**	**4.5%**	**100%**

Table 28

Gender and Commute Mode

	Drive Alone	Carpool	Transit	Other	Total
Male *(51.6% of respondents)*	71.1%	10.6%	13.2%	5.2%	100%
Female *(48.4% of respondents)*	64.0%	18.1%	14.1%	3.8%	100%
Regional Average *n=3,608*	**67.6%**	**14.2%**	**13.6%**	**4.5%**	**100%**

nificantly lower. This group, however, represents only 5% of the commuting population. Carpooling is higher for those in the upper income levels (i.e., above $80,000). Women are more likely to carpool than men (Table 28).

Vehicle Availability

Almost all respondents (95.7%) to this survey have a vehicle available for their commute "always" or "sometimes." For almost 90% a vehicle is always available. Availability varies a bit from county to county. San Francisco stands out as being the least auto dependent. Over 18% of San Francisco residents who responded to the survey "never" have a vehicle available for their commute. Sonoma and Napa respondents were the most likely to indicate that they always had a vehicle available for their commute.

As one might guess, vehicle availability has a strong influence on mode choice. For those who drive alone, 96% "always" have a vehicle available. For those who carpool, "always available" drops to 90% and for those who use transit as their primary commute mode it drops significantly to 64%. ●

Table 29

Vehicle Availability by County

County	Always	Sometimes	Never
Alameda	87.0%	8.5%	4.5%
Contra Costa	93.8%	3.8%	2.5%
Marin	89.5%	6.3%	4.3%
Napa	95.5%	3.3%	1.3%
San Francisco	72.2%	9.5%	18.3%
San Mateo	91.4%	7.3%	1.3%
Santa Clara	93.2%	5.0%	1.8%
Solano	90.5%	6.5%	3.0%
Sonoma	95.7%	3.3%	1.0%
Regional Average *n=3,600*	**89.3%**	**6.4%**	**4.4%**

RIDES is dedicated to helping commuters in the San Francisco Bay Area find and use alternatives to driving alone. RIDES is funded by the Metropolitan Transportation Commission and the Bay Area Air Quality Management District.

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